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ICONES ORCHIDACEARUM

Fascicle 7

THE GENUS EPIDENDRUM

Part 4

"A Fourth Century of New Species in Epidendrum"

Eric Hágsater

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ICONES ORCHIDACEARUM

Fascicle 7, plates 701 to 800

THE GENUS *EPIDENDRUM*
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"A Fourth Century of New Species in *Epidendrum*"

Reference Map

TROPICAL AMERICA
(numbers refer to the portions of the map used in individual plates)



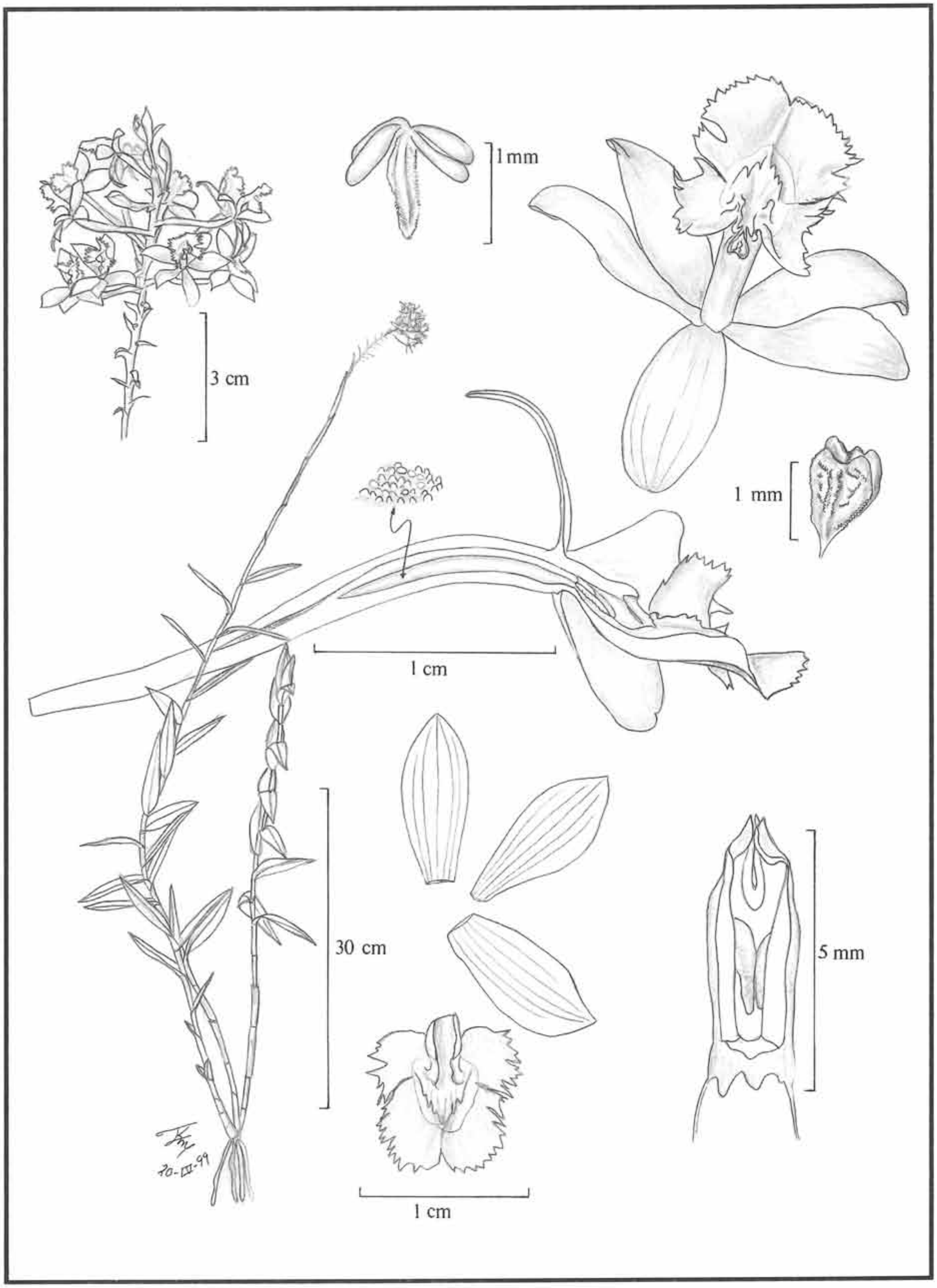
ICONES ORCHIDACEARUM

Fascicle 7, plates 701 to 800

THE GENUS *EPIDENDRUM*
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Index to Plates



EPIDENDRUM ACKERMANII Hágsater

Plate 701

EPIDENDRUM ACKERMANII Hágsater, *sp. nov.*

Type: PUERTO RICO: Orocovis, Lago Guineo, S side of lake, 900-950 m, collected 4 July 1993 by ***James D. Ackerman***, pressed in cultivation in Mexico, 14 March 1997, ***E. Hágsater 11414***. Holotype: UPRRP! Isotype: AMO! (Illustration vouchers, flowers in spirit). Paratypes: ibid. pressed 24 March 1997, *Hágsater 11415*, K! US!

Epidendro secundo Jacq. simile sed floribus majoribus, sepalis petalisque 5-nervatis, petalis rhombeis rectis, labello in ambitu generali subquadrato, leviter longiore quam latiore, in 4 lobulos suborbiculares diviso, lobulis similaribus sed pari apicali aliquantum majore, floribus roseis in disco calloque macula alba ferentibus, recedit.

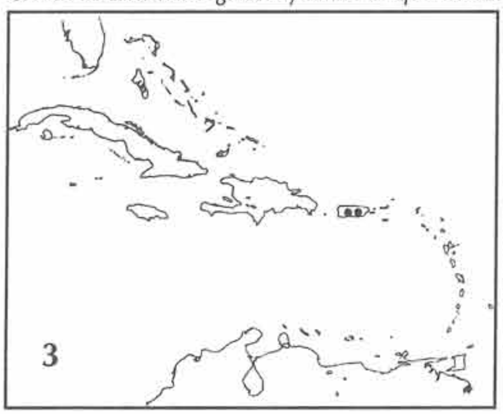
Hierba terrestre, epífita y litófita, cespitosa, de 45-80 cm de alto. **Raíces** numerosas, basales, teretes, flexuosas, 1-2.5 mm de grosor. **Tallos** sencillos, tipo caña, erectos, teretes de 28-42 x 0.2-0.6 cm. **Hojas** numerosas, distribuidas a lo largo de los tallos, disminuyendo de tamaño hacia el ápice; vaina tubular, estriada, las basales escariosas, 10-40 x 2-6 mm; lámina lanceolada, aguda, mucronada, coriácea, lisa, margen entero, 4-10 x 1-2.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, subcorimbosa, erecta, (12)30-36 cm de largo; pedúnculo alargado, erecto, de 25-30 cm de largo, cubierto por 5-6 brácteas tubulares, agudas, escariosas de 4-6 cm de largo. **Brácteas florales** mucho más cortas que el ovario, largamente triangulares, acuminadas a agudas, quilladas en el dorso, 4-15 x 1.5-2 mm. **Flores** 15-25, sucesivas, generalmente 6-10 a la vez, no resupinadas, de color rosa intenso con el disco blanco, incluyendo el callo, fragancia ausente. **Ovario** no inflado, terete, no ornamentado, 17-23 mm de largo. **Sépalos** agudos, 5-nervados, 9.5-10.5 x 3.5-4.5 mm, el **dorsal** elíptico; los **laterales** obovados a oblongo obovados, algo oblicuos, cortamente aristados. **Pétalos** rómbicos, agudos, 5-nervados, 10-11 x 4.5-5.5 mm. **Labelo** unido a todo lo largo de la columna, trilobado, subcuadrado en forma general, 8-9 x 7-8 mm; callo complejo, conspicuo, formado por una placa carnosa oblongo elipsoide con 2 procesos uncinados cerca de la base y algunos tubérculos marginales; lóbulos laterales suborbiculares, irregularmente dentado laciniados, 3 x 3.5 mm; lóbulo medio rectangular, emarginado, irregularmente dentado laciniado, 4.5-5 x 7 mm. **Columna** recta, terete, ensanchada hacia el ápice, 4-5 mm. **Clinandrio** corto, entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** alargados, ocupando casi toda la longitud de la cavidad. **Antera** ovada, con una quilla roma al frente hacia el ápice, diminutamente papilosa, 4-locular. **Polinios** 4, subclaviformes, subiguales, aplanados lateralmente; caudículas suaves y granulosas, más largas, en forma de tejas apiladas. **Nectario** profundo, penetrando la mitad del ovario, papiloso. **Cápsula** no vista.

Terrestrial, epiphytic and lithophytic, caespitose **herb**. **Stems** terete. **Leaves** lanceolate, acute, mucronate, coriaceous; sheaths striate, the basal ones scariose. **Inflorescence** apical, peduncle elongate, subcorymbose. **Floral bracts** smaller than the ovary, triangular, acuminate to acute, keeled dorsally. **Flowers** successive, about a dozen open at one time, non-resupinate, pink, disc white, including the callus. **Ovary** not inflated, terete, unornamented. **Sepals** acute, 5-veined, the **dorsal** elliptic, **laterals** obovate, oblong-obovate, oblique, short aristate. **Petals** rhombic, acute, 5-veined, about as wide as the sepals. **Lip** united to the column, obscurely 3-lobed, the general form subquadrate; callus complex, thick, with two unicarinate processes; lateral lobes suborbicular, dentate-laciniate; midlobe rectangular, emarginate, apiculate, margin dentate-laciniate. **Column** straight, terete. **Clinandrium hood** reduced, entire. **Anther** ovate, with a keel at the apex, 4-celled. **Pollinia** 4, subclaviform, subequal, laterally compressed; caudicles soft and granulose, longer than the pollinia. **Rostellum** apical, slit.. **Nectary** penetrating 1/2 of the ovary, papillose.

DISTRIBUTION AND ECOLOGY: Endemic to Puerto Rico. Terrestrial or lithophytic and epiphytic, in disturbed areas in wet forest regions, from 450 to 1338 m altitude. Flowering throughout the year, mostly from January to July.

OTHER REPRESENTATIVE SPECIMENS: PUERTO RICO: Cerro de la Punta, ca. 1200 m, 15 VIII 1982, *Ackerman 1694* UPRRP! Lago Guineo, 2970-3020 ft. [890-906 m], 18 II 1984, *Ackerman 1948* UPRRP! Rt 143 Km 19.3, 1200-1250 m, 1 XII 1984, *Ackerman 2047* UPRRP! headwaters of Río Guayo, *Ackerman 2066* UPRRP! Cerro de Punta, 1060 m, 30 VIII 1986, *Ackerman 2296* UPRRP! Las Tetas de Cayey, ca. 800 m, 11 II 1986, *Ackerman 2331* UPRRP! Las Tetas de Cayey, ca. 800 m, 4 VIII 1988, *Ackerman 2457* NY! UPRRP! W slopes of Cerro Doña Juana, ca. 950 m, 25 IX 1988, *Ackerman 2460* UPRRP! Cerro Torrecilla, 940 m, 22 II 1987, *Alvarez 21* UPRRP! Prope Maricao in Montis Alegrillo, 26 XI 1884, *Sintenis 508*, W! Adjuntas, Montis Cedro, *Sintenis 4021* AMES x2! BM! E! G! K! L! M! NY! PR! MO! P x2! W! Adjuntas, monte Capaes, 29 III 1886, *Sintenis 4109* BR! CM! K! S! P x2! Z! Prope Adjuntas in sylva La Lucia in monte Ciénega, 25 IV 1886, *Sintenis 4304* BAF! Rt. 143 ca. 0.5-3 mi W of its intersection with Rt 149, 26 I 1986, *Taylor 6653* UPRRP! Cayey, 14 VI 1901, *Underwood & Griggs 435* AMES! NY x2! Santana, Sab. Gde., 3 V 1936, *Vélez 796* NY x2! Toro Negro forest, crest of Cordillera Central SW of Cerro Doña Juana, 950-970 m, 950-970 m, 7 VII 1959, *Webster 8727* S!

RECOGNITION: *Epidendrum ackermanii* belongs to the Schistochilum Group, Secundum Subgroup which is characerized by the caespitose habit, terete stems with several oblong-elliptic, acute to bilobed, distichous leaves, the scape elongate, with a short, apical raceme of successive, non-resupinate flowers, with a complicated, pluritubercul ate callus. The species is recognized by the lanceolate, acute leaves, rhombic, straight, 5-veined petals, the elliptic, acute, straight, 5-veined sepals and the subquadrate lip in general outline, slightly longer than wide, the outline irregular dentate-laciniate, the lip formed by subequal, suborbicular lobes, the apical ones being somewhat larger; the flowers are pink, with a white blotch on the disc covering more than the callus. It resembles *Epidendrum secundum* Jacq. from the lesser Antillies which has smaller flowers, the petals oblanceolate-cuneate, somewhat oblique and 3-veined, the sepals obliquely obovate, obtuse, 3-veined, with the lateral veins branching so as to appear 6-veined above, the lip trapezoid in outline, wider than long, the margin deeply fimbriate, the lateral lobes larger than the apical lobes, the apical lobe widely flabellate, truncate. In the Greater Antillies it is vegetatively similar to *Epidendrum wrightii* Lindl. which has orange flowers, a deltate-ovate lip, V-shaped callus, prolonged into a central keel. It has been confused with *Epidendrum anceps* Jacq., which has lanceolate to obovate leaves of variable length, and a subcorymbose inflorescence with simultaneous purple-brown, fleshy flowers, and an ecallose lip with suborbicular laterals lobes, and entire margins.



CONSERVATION STATUS: Not threatened. Common in Puerto Rico, both epiphytic and mostly terrestrial including roadbanks and disturbed areas in wet forests. It is found in protected areas.

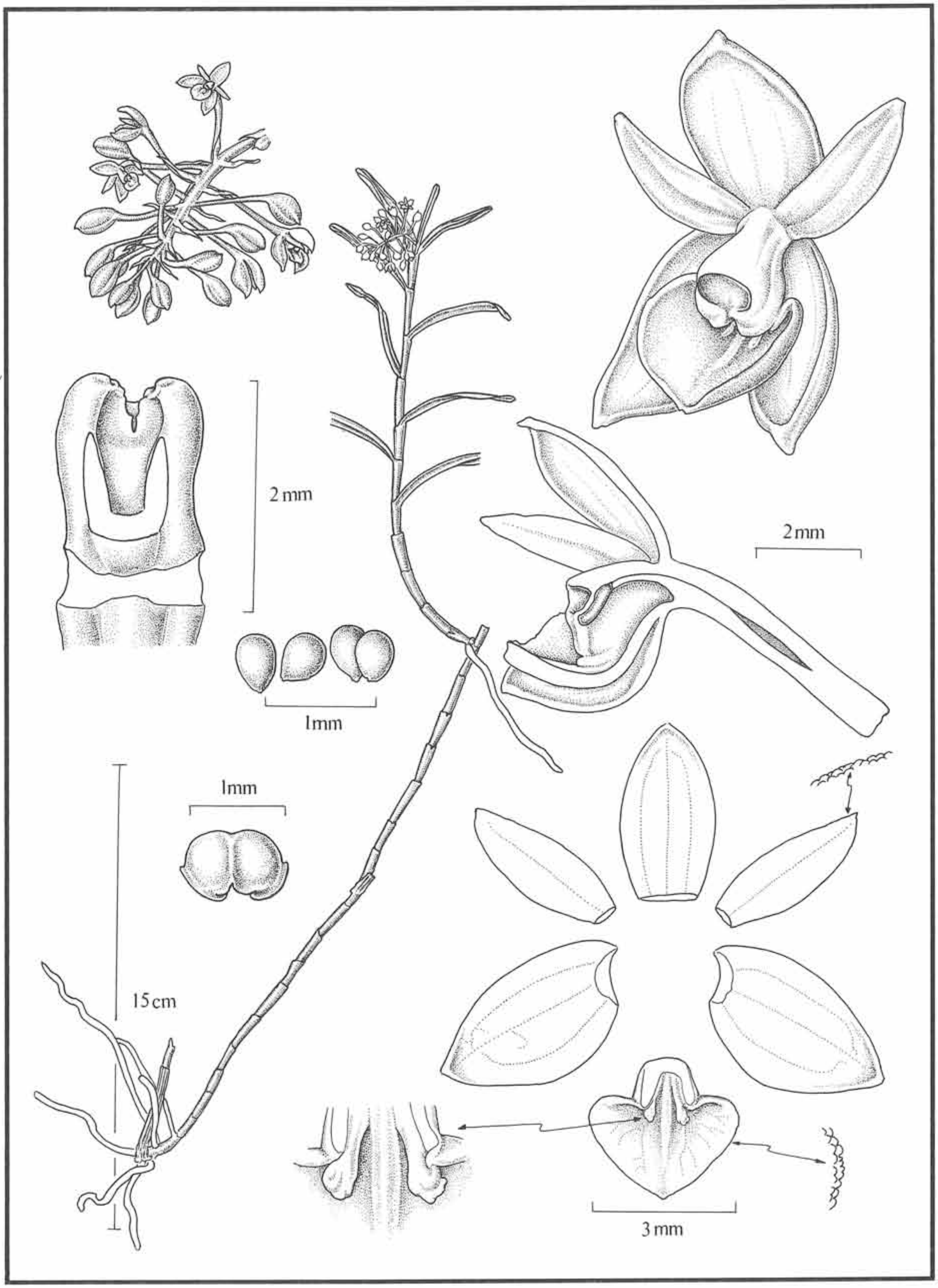
COMMON NAME: Angelitos (Del Castillo & Ackerman, 1992).

ETYMOLOGY: In honor of James D. Ackerman (1950-), botanist at the University of Puerto Rico at Río Piedras, who has studied the orchids of the island extensively and provided the material for the type.

REFERENCES: Ackerman, J. D., & Del Castillo Mayda, M., 1992. **The Orchids of Puerto Rico and the Virgin Islands**. University of Puerto Rico Press, San Juan, Puerto Rico. Plate 120, (as *E. secundum* Jacq.). Ackerman, J. D., 1995. **An Orchid Flora of Puerto Rico and the Virgin Islands.** Memoirs of the New York Botanical Garden. U.S.A. pg. 59-61, (as *E. secundum* Jacq.).

Author: E. Hágsater **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM ALFONSOPOZOI Hágsater & Dodson **Plate 702**

EPIDENDRUM ALFONSOPOZOI Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Azuay: West of km 69 on the Cuenca-Loja road, 2650 m, 30 November 1984, ***C. H. Dodson & Benigno Malo Vega 15491.*** Holotype QCNE! Isotypes: QCA! RPSC! (Illustration voucher).

Epidendro jativae Dodson simile sed floribus resupinatis spiraliter dispositis, aurantiaco-ochraceis et rubro-maculatis, sepalis 4 mm longis, labello integro cordiformi et columna 2 mm longa differt.

Hierba epífita, no ramificada, de más de 46 cm de alto. **Raíces** en el tallo inicial no vistas, escasas en la base de los tallos sucesivos, carnosas, delgadas, 1.6-2.4 mm de grosor. **Tallos** originándose del entrenudo apical del tallo anterior, tipo caña, teretes, delgados, rectos, el inicial no visto, los sucesivos, 10-39 x 0.13-0.28 cm. **Hojas** 6-16, distribuidas a lo largo del tallo, las basales generalmente caedizas, alternas, subcoriáceas, suberectas; vaina tubular finamente estriada cuando seca, las apicales teñidas de purpúra intenso, 1.4-2.4 x 0.13-0.28 cm; lámina linear lanceolada, ápice obtuso, bilobado, margen entero, lisa, [1.5]3.5-6.3 x 0.32-0.8[1.0] cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, subumbeliforme, ligeramente arqueada, 2.3 cm de largo; pedúnculo corto, terete, delgado, liso, 8 mm de largo; provisto en la parte media basal de 2 brácteas semejantes a las florales, angostamente triangulares, acuminadas, 3-6 mm de largo; raquis terete, delgado, recto, 1.5 cm de largo. **Brácteas florales** cerca de la mitad del largo que el ovario, gradualmente más pequeñas hacia el ápice, angostamente triangulares, acuminadas, 2-4 mm de largo. **Flores** 22, simultáneas, resupinadas, dispuestas en espiral a lo largo del raquis, color anaranjado ocre, columna y disco rojo borgoña, sin fragancia. **Ovario** terete, delgado, no inflado, liso, 7 mm de largo. **Sépalos** entreabiertos, libres, elípticos, ápice redondeado, 3-nervados, margen entero, carnosos, 4 x 2.4 mm. **Pétalos** extendidos, libres, oblongos, subagudos, carnosos, 1-nervado, margen diminutamente eroso, extendido, 3.8 x 0.6 mm. **Labelo** unido a la columna, entero, cordiforme, cordado en la base, algo cóncavo, margen ligeramente sinuoso, borde diminutamente papiloso, 2.5 x 3 mm; ecalloso, con tres quillas romas, lisas, la laterales cortas, divaricadas, la central desvaneciéndose antes de llegar al ápice del labelo. **Columna** recta, gruesa, ventralmente provista de un par de alas rectas gradualmente dilatadas hacia el ápice, no involutas, 2 mm de largo. **Clinandrio** reducido, entero. **Antera** 4-locular, reniforme. **Polinios** 4, obovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** sin traspasar el perianto, liso. **Cápsula** no vista.

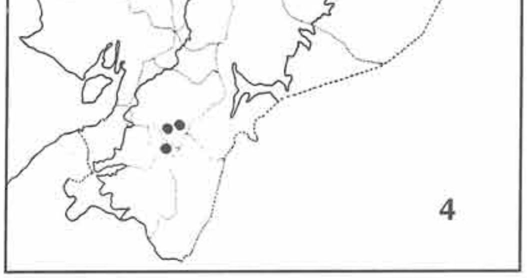
Epiphytic, branching **herb. Roots** few, from the base of the stems, thick. **Stems** originating from apical internode of the previous stem, cane-like, terete, thin, straight. **Leaves** 6-16, distributed throughout of the stem, the lower ones deciduous, subcoriaceous, suberect; sheath tubular, minutely striated when dry, the apical ones purple-tinged; blade linear-lanceolate, apex obtuse, bilobed, margin entire, smooth. **Inflorescence** apical, flowering only once, racemose, subumbellate, somewhat arched; peduncle short, terete, thin, with two bracts near the base, similar to the floral bracts; rachis terete, thin, straight. **Floral bracts** about half as long as the ovary to shorter, narrowly triangular, acuminate. **Flowers** 22, simultaneous, resupinate, spirally disposed on the rachis, orange-ochre, column and disc burgundy red, not fragrance. **Ovary** terete, thin, not inflated, smooth. **Sepals** partly spreading, free, elliptic, apex rounded, 3-veined, margin entire, fleshy. **Petals** spreading, free, oblong, subacute, 1-veined, fleshy, margin minutely erose, extended. **Lip** united to the column, entire, cordiform, base cordate, somewhat concave, margin slightly sinuose, border minutely papillose, ecallose, with three keels, rounded, smooth, the lateral ones short, divaricate, the central one disappearing before the apex of the lip. **Column** straight, thick, provided ventrally with a pair of straight wings gradually dilated towards the apex, not involute. **Clinandrium hood** reduced, entire. **Anther** 4-celled, reniform. **Pollinia** 4, obovoid. **Rostellum** apical, slit. **Nectary** not penetrating the ovary, smooth.

OTHER SPECIMENS: ECUADOR: Azuay: Collected in the Garden of Alfonso Pozo, originally from Oña, 20 XI 1988, *Dodson 17718*, RPSC! Río Dircay, hort. Alfonso Pozo, Cuenca, 20 XI 1988, *Hágsater 9595*, AMO! Hort. Ecuagenera, pressed 8 III 2003, *Hágsater 13845,* AMO! **El Oro:** Chilla to Antennas, 3100 m, 20 XI 1996, *Lewis 2851*, LOJA! **Loja:** Chilla, track Antennas and páramo, 3100 m, 7 XI 1997, *Lewis 3698*, LOJA! QCNE! (illustration, AMO!) Vicinity of Zaragura, 27 IX 1918, *Rose 23139*, AMES! NY! US!

OTHER RECORDS: ECUADOR: Azuay: hort. Ecuagenera, *Hirtz 7799*, slide, AMO!

DISTRIBUTION AND ECOLOGY: Known only from Ecuador, from the province of Azuay bordering on Loja, in the interandean valley at 2650-3100 m altitude. Often growing on sheer rock faces with *Tillandsia tectorum* Morren, and in old trees. Flowering in September to March.

RECOGNITION: *Epidendrum alfonsopozoi* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose, without or with 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The new species is recognized by the resupinate, orange-ochre marked with burgundy-red flowers, sepals 4 mm long, with a cordiform lip, 2.5 x 3 mm, with three keels, and a straight column, 2 mm long. It is similar to *Epidendrum jativae* Dodson which has non-resupinate, green to purplish brown flowers, sepals 6 mm long, the lip 7 x 8 mm, three-lobed with the midlobe bilobed, column 5 mm long. *Epidendrum microdiothoneum* Hágsater & Dodson has an arched column, resupinate, greenish yellow to brownish purple flowers, sepals 6-7 mm long, lip three-lobed, 7 x 6 mm, and ovary thickened ventrally along the apical 2/3[rd], column 3 mm long.

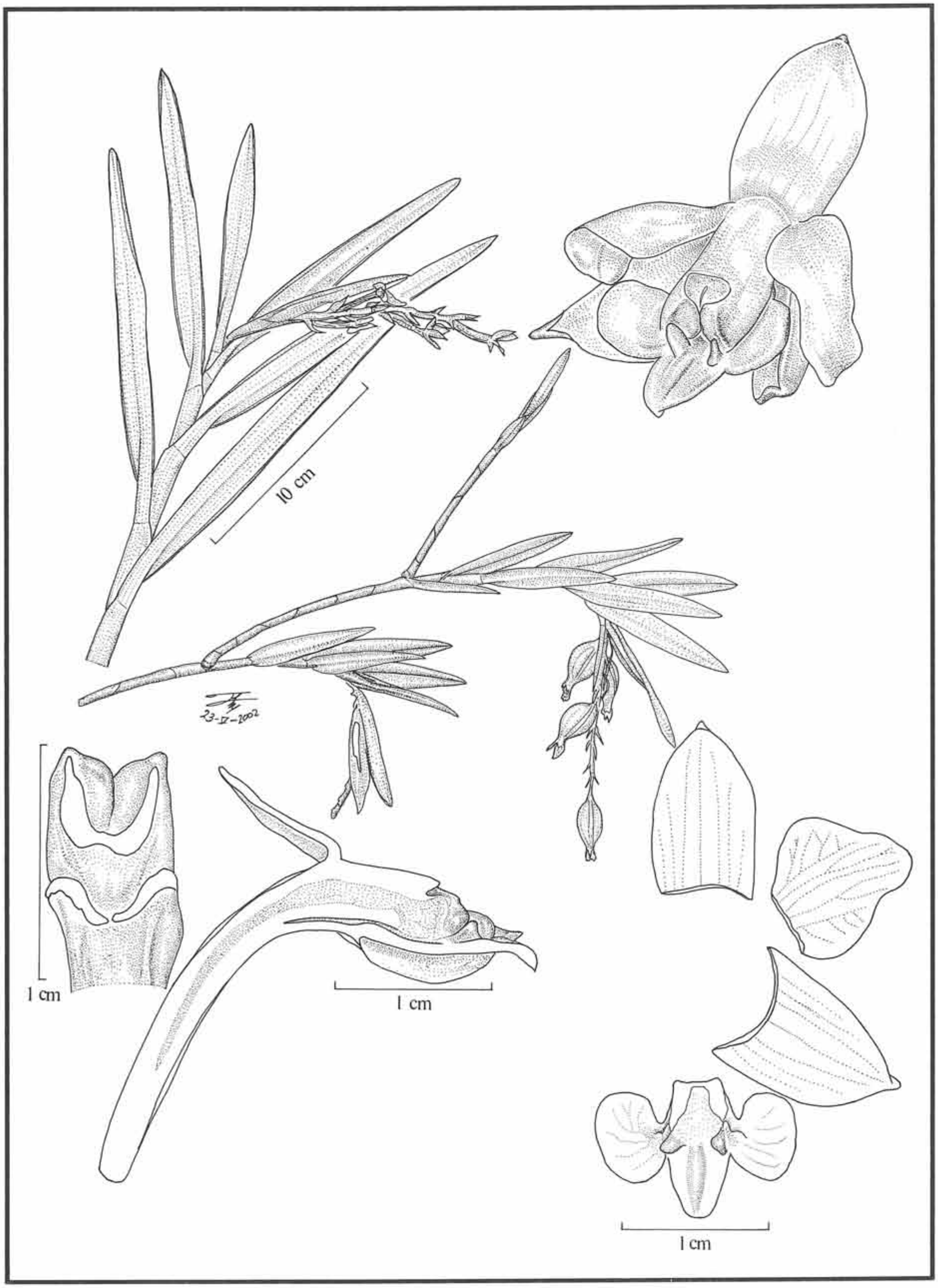


CONSERVATION STATUS: DD. Data deficient. Apparently locally common in an area where few orchids are expected.

ETYMOLOGY: In honor of Alfonso Pozo V. of Cuenca, who first shared this species with the authors.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM AMPELOSPATHUM Hágsater & Dodson **Plate 703**

EPIDENDRUM AMPELOSPATHUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Morona Santiago: Gualaquiza, Parroquia San Miguel de Cuyes, Bosque Protector Tambillo, 03°16´21"S 78°50´53"W, 2600 m, epiphytic, 1 July 1997, ***Linder Suin & Holger Zhunio 259.*** Holotype: QCNE! (Illustration voucher). Isotype: AMO!

Epidendro klotzscheano Rchb.f. simile sed planta scandens, quoque caule in caulis antiqui dimidio nato, caulibus brevibus 5-7-foliatis, petalis late trullatis abhorrens.

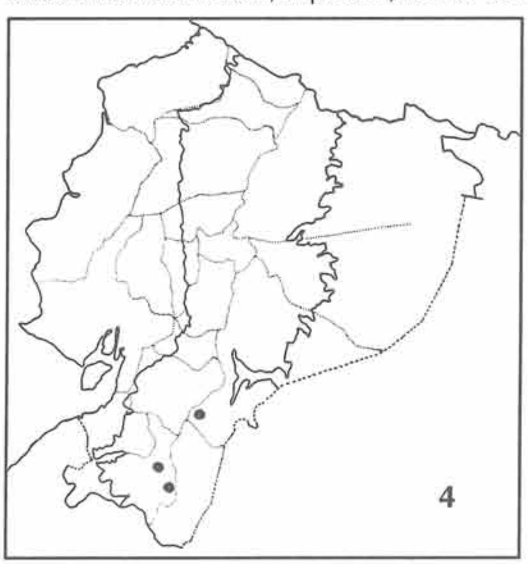
Hierba epífita y litófita, escandente, erecta o arqueada en ejemplares maduros, de crecimiento sucesivo lateral, hasta 2.5 m de alto. **Raíces** gruesas, muy largas, aparentemente solo de la base de los tallos inferiores. **Tallos** producidos cerca de la parte media del tallo anterior, a la altura de la primera hoja, tipo caña, teretes en la base, lateralmente aplanados en la parte foliosa, gruesos, ca. 20-30 x 0.7-1.0 cm. **Hojas** 6-7 por tallo, distribuidas a lo largo de la mitad apical, alternas, erectas, coriáceas; vainas tubulares, estriadas y rugosas, 1.6-3.5 x 0.45-1.0 cm; lámina angostamente lanceolada, aguda, con una quilla dorsal prominente, diminutamente apiculada, lisa, margen entero, ligeramente revoluto en ejemplares secos, 11.2-18.5 x 1.3-1.6 cm. **Brácteas espatáceas** 1-2, tubulares en el 1/3 basal, abiertas en los 2/3 apicales, agudas, margen entero semiconduplicado hacia la zona media apical, estriadas cuando seca en pardo claro, 8.5-9.1 cm de largo. **Inflorescencia** apical, racemosa, arqueada, florece una sola vez, 9.0-12.5 cm de largo; pedúnculo, terete a lateralmente aplanado, grueso, estriado, recto, 4-5 cm de largo, ocasionalmente provisto en la parte media de una bráctea linear lanceolada, subacuminada, margen entero, abrazadora, 3.1 cm de largo; raquis terete, grueso, ligeramente flexuoso en la base y recto hacia en ápice, 5.5-8.0 cm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, gradualmente más pequeñas hacia el ápice, 6-12 mm de largo. **Flores** hasta 12, simultáneas, amarillas a verde amarillentas; sin fragancia. **Ovario** terete, (en la ilustración en proceso de formación de cápsula). **Sépalos** libres, cortamente oblongos, subagudos, diminutamente apiculados, 7-nervados, margen entero, 10.5-14 x 6.3-7.5 mm; los **laterales** entreabiertos; el **dorsal** reflexo. **Pétalos** entreabiertos, libres, anchamente ovados subtrulados, redondeados, 5-nervados, las nervaduras laterales cortamente ramificadas, margen entero, 8.4-8.6 x 8.4-9.2 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, margen entero, 7.8 x 12.3 mm; bicalloso, los callos erectos y prominentes, en forma de cuernos, separados, alargados hasta la base del lóbulo medio, disco unicarinado, la carina delgada, roma, lisa, alargada hasta cerca del ápice del lóbulo medio; lóbulos laterales reniformes, redondeados, 4.5 x 5.7 mm; lóbulo medio triangular, ápice truncado, redondeado, 3.9 x 3.9 mm. **Columna** recta, gruesa, 10 mm de largo. **Clinandrio** reducido, entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** apenas penetrando el perianto, liso, no inflado. **Cápsula** elipsoidal, 4 x 2 cm; cuello y pedicelo muy cortos, de color verde claro, perianto persistente.

Epiphytic and lithophytic, scandent, erect to arching **herb**, of successive lateral growth. **Stems** produced from the middle of the previous stem, cane-like, terete at the base, laterally compressed above. **Leaves** 6-7 per stem, distributed throughout the upper half of the stem, erect, coriaceous; sheath tubular, striated, rugose; blade narrowly lanceolate, acute, smooth, margin entire, somewhat revolute in dried specimens. **Spathaceous bracts** 1-2, tubular below, conduplicate above, acute, margin entire, light brown when dry. **Inflorescence** apical, racemose, arching, flowering only once. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** ca. 12, simultaneous, yellow to yellowish green, without fragrance. **Ovary** terete (the illustration prepared from a pollinated flower). **Sepals** partly spreading, the dorsal reflexed, free, short oblong, subacute, minutely apiculate, 7-veined, margin entire. **Petals** partly spreading, free, widely ovate subtrullate, rounded, 5-veined, the lateral veins short branched, margin entire. **Lip** united to the column, 3-lobed, the base deeply cordate, margin entire, bicallose, the calli erect, prominent, horn-like, widely separate near the base of the midlobe, a low fleshy keel runs down the middle of the midlobe; lateral lobes reniform, obliquely orbicular, rounded; midlobe triangular, apex truncate, rounded. **Column** short, thick. **Clinandrium hood** reduced, entire. **Rostellum** apical, slit. **Nectary** barely penetrating the ovary, smooth, not inflated. **Capsule** ellipsoid, with short pedicel and neck, perianth persistent.

OTHER SPECIMENS: ECUADOR: Loja: Villonaco, 2900 m, 5 X 1946, *Espinosa 709,* AMES 109666! NY! Parque Nacional Podocarpus, E. of Nudo de Cajanuma, 2900 m, 21 IX 1988, *Madsen 75440*, LOJA!

DISTRIBUTION AND ECOLOGY: Known only from the type, on the eastern slopes of the Andes in central Ecuador, at 2600-2900 m altitude, on tree trunks and branches of trees. Flowering in June. Fruiting in July and later.

RECOGNITION: *Epidendrum ampelospathum* would appear to belong to the Alpicolum Group, Klotzscheanum Subgroup, and at first sight is reminiscent of *E. klotzscheanum* Rchb.f. with which it shares the lanceolate leaves, arching, racemose inflorescence subtended by 1-2 large, acute spathaceous bracts, and the fleshy flowers with a 3-lobed lip. The new species, however, has a peculiar habit, with relatively short stems produced from middle of the previous stem, at around the first leaf, producing plants up to 2.5 m tall, the stems with only 5-7 leaves, which are less than 2 cm wide, and the yellow to yellowish green flowers with very wide, trullate petals. *Epidendrum klotzscheanum* Rchb. f. has tall, simple stems, narrower floral segments, a rectangular midlobe of the lip and narrow, oblanceolate petals. *Epidendrum prasinum* Schltr. has a pendent, branching habit, with narrowly elliptic petals. Most other species with spathaceous bracts, and racemose, many flowered inflorescences and 3-lobed lips have caespitose plants, with the stems produced from the base of the previous stem. Only *Epidendrum alpicoloscandens* Hágsater & Dodson, produces the new stems about 1/5th from the base of the previous stem, and the plants are relatively short, with very narrow floral segments.



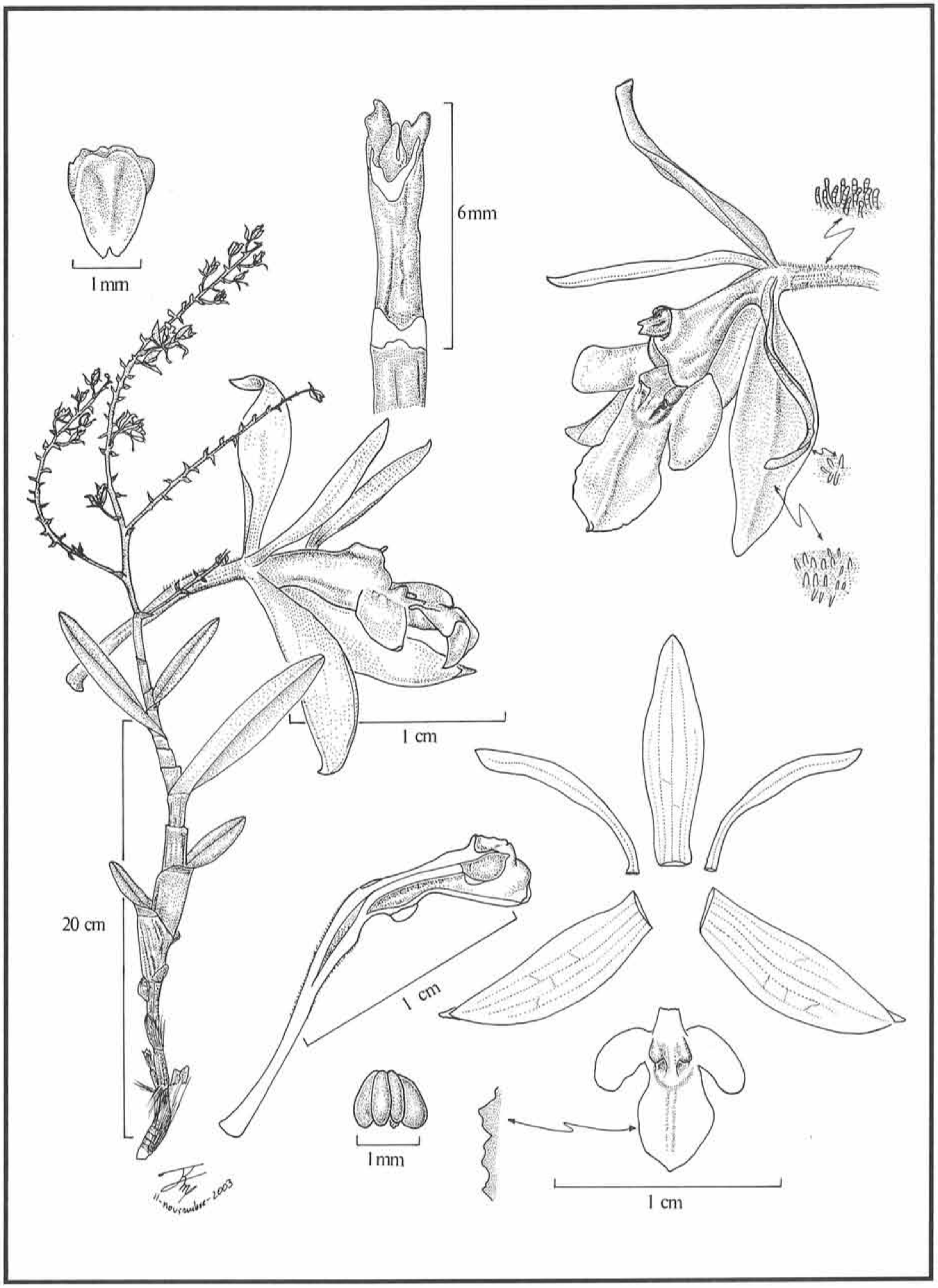
NOTE: The type specimens represent only the apical, leafy portion of two stems, the flowers appear to have been self fertilized, are wilted, and the ovary beginning to thicken. The plant habit was prepared from a photograph provided by one of the authors and represents the upper portion of a plant in fruit.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek αμπελος- climbing plant, vine, and , spathe, in reference to the climbing modular habit of the plant and the prominent spathaceous bracts that subtend the inflorescence, an unusual combination of characters in the genus.

Authors: E. Hágsater & C. H. Dodson **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM ANCIROTYLOSUM Hágsater & E. Santiago

Plate 704

EPIDENDRUM ANCIROTYLOSUM Hágsater *et* E. Santiago, *sp. nov.*

Type: PERU: Puno: Sandia, alrededores de Sandia, 2250 m, 5 February 1964, ***C. Vargas C. 15150***
Holotype: AMES 102746! (Illustration voucher). Isotype: AMES 113557!

Epidendro pubifloro C. Schweinf. simile sed rhachide glabra, petalis linearibus falcatis, labello bicalloso in structuram semicircularem carnosam ad lobuli medii basem prolongato, labelli lobulis lateralibus oblongo-reniformibus, lobulo medio anguste subrhombeo ad apicem obtuso discrepans.

Hierba litófita, de 45 cm de alto. **Raíces** no vistas. **Tallos** sencillos, tipo caña, lateralmente aplanados, ligeramente engrosados hacia la parte media, rectos, suberectos, 20 x 0.3-1.5 cm. **Hojas** 9, distribuidas hacia la mitad apical del tallo, alternas, articuladas, las inferiores más pequeñas, subcoriáceas; vainas tubulares, ligeramente infladas en seco sin llegar a ser infundibuliformes, finamente estriadas, las inferiores fibrosas con el tiempo, 9-30 x 3-15 mm; lámina lanceolada, bilobada, con una quilla dorsal baja, lisa, margen entero, 5.1-11.7 x 1.3-2.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, suberecta, paniculada, 25 cm de largo; con tres racimos ligeramente arqueados, 11.5-13 cm de largo; pedúnculo lateralmente aplanado, 3.8 cm de largo, provisto en su parte media de una bráctea semejante a las brácteas basales de las ramas, anchamente triangular, aguda, abrazadora, 4 mm de largo, raquis glabra. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 3-4 mm de largo. **Flores** ca. 90, simultáneas, resupinadas, sin datos de color ni fragancia. **Ovario** delgado, terete, no inflado, pubescente, ornamentado con tricomas multicelulares, 8-10 mm de largo. **Sépalos** libres, extendidos, elípticos, subagudos, con una quilla dorsal, 5-nervados, membranáceos, dorsalmente escasa y cortamente pubescentes, margen entero, 10 x 2.7-3.1 mm; los **laterales** oblicuos, aristados. **Pétalos** extendidos, libres, lineares, redondeados, 1-nervados, margen entero, falcados, membranáceos, 8.7-9.1 x 0.8-1 mm. **Labelo** unido a la columna, trilobado, base cordada, margen diminutamente dentado, 6.2 x 6.6 mm; bicalloso, callos basales, con un cunículo debajo de cada uno, la quilla central prolongándose en una estructura semicircular carnosa en la base del lóbulo medio, que a su vez continua en una carina baja, lisa que se desvanece antes de llegar al ápice del lóbulo medio; lóbulos laterales oblicuamente oblongo reniformes, redondeados, 2.2 x 3.5 mm; lóbulo medio angostamente subrómbico, obtuso, 5.8 x 3.3 mm. **Columna** recta, dilatada hacia el ápice, delgada en la base, 6 mm de largo. **Clinandrio** reducido, margen entero. **Antera** obovoide, 4-locular. **Polinios** 4, ovoides lateralmente aplanados, caudículas suaves y granulosas, casi tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de ½ de largo de la cavidad estigmática. **Nectario** sin penetrar el ovario, no inflado, liso. **Cápsula** no vista.

Lithophytic, erect, **herb. Stem** simple, cane-like, laterally flattened, somewhat thickened towards the middle, straight. **Leaves** 9, distributed along the apical half of the stem, alternate, articulate, unequal, the lower one smaller, subcoriaceous; sheaths tubular, slightly inflated when dry, finely striated, the lower one becoming fibrous with time; blade lanceolate, bilobed, with a low dorsal keel, glabrous, margin entire. **Inflorescence** apical, suberect, paniculate, with three slightly arching branches; peduncle laterally flattened, provided with a bract similar to those of the branches near the middle, widely triangular, acute, rachis glabrous. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** about 90, simultaneous, resupinate. **Ovary** thin, terete, pubescent, ornate with multicellular trichomes. **Sepals** free, spreading, elliptic, subacute, with a dorsal keel, 5-veined, membranaceous, margin entire, dorsally scarcely and minutely pubescent, the **lateral sepals** oblique, aristate. **Petals** spreading, free, linear, rounded, 1-veined, margin entire, falcate, membranaceous. **Lip** united to the column, 3-lobed, base cordate, margin minutely dentate; bicallose, calli basal, with a cuniculus beneath each one, the central keel prolonged into a semicircular, fleshy structure at the base of the midlobe; disc unicarinate, the keel low, smooth, disappearing before the apex; lateral lobes obliquely oblong-reniform, rounded; midlobe narrowly subrhombic, rounded. **Column** straight, thin at the base, dilated towards the apex. **Clinandrium hood** reduced, entire. **Anther** obovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles smooth and granulose, nearly as long as the pollinia. **Rostellum** apical, slit. **Nectary** not penetrating the ovary, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the upper reaches of the Amazon slope of the Andes, near the Bolivian-Peruvian border, at 2250 m altitude, growing on rocky ground. Flowering in February.

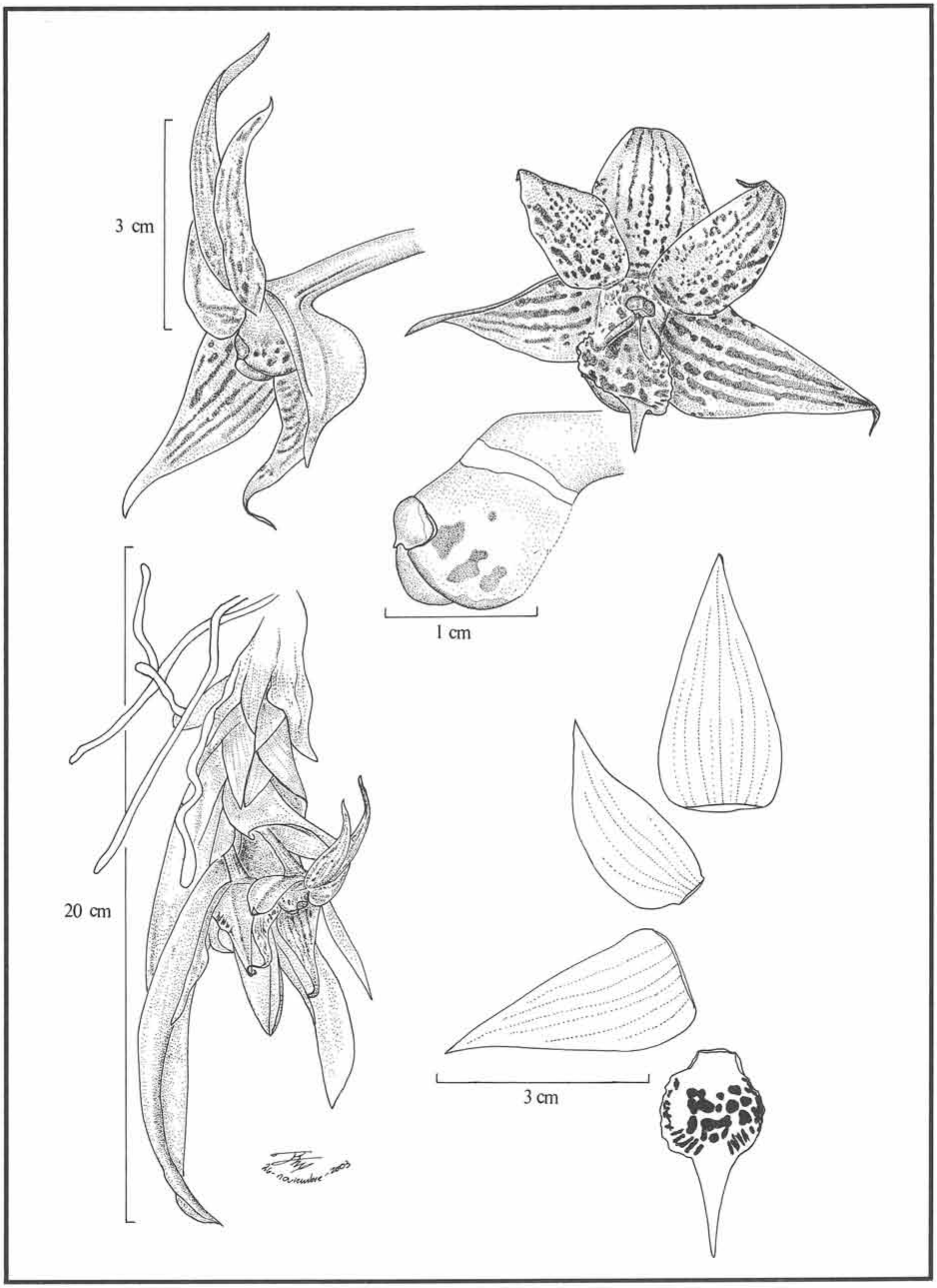
RECOGNITION: *Epidendrum ancirotylosum* belongs to the Amblostomioides Subgroup of the Amblostoma Group which is characterized by the caespitose habit, the thinly fusiform stems with narrow, apically bilobed, subcoriaceous leaves distributed along the apical half of the stems, an often large, apical, erect, paniculate inflorescence, the flowers greenish-yellow to white, the ovary and the sepals usually dorsally pubescent, and the lip 3-lobed. The species has short, thickened stems, an erect, relatively large, paniculate inflorescence, the rachis glabrous, heavy flowers, the ovaries pubescent, the sepals dorsally sparsely short-pubescent, petals linear, falcate, and the lip deeply 3-lobed, the lateral lobes obliquely oblong-reniform, the midlobe narrowly subrhombic, obtuse, bicallose, the calli with a cuniculus beneath them, and a semicircular, anchor-shaped structure in front. It is somewhat similar to *Epidendrum pubiflorum* C. Schweinf. which has the rachis finely pubescent, slighlty larger flowers about as heavy looking, but the petals are 2 mm wide and the lip is bicallose and 3-keeled, the lateral lobes dolabriform and the midlobe cuneate, truncate. *Epidendrum lanipes* Lindl. has larger plants and flowers strongly fragrant of citrus, the rachis as well as the ovaries are pubescent, lateral lobes of the lip semiovate, midlobe cuneate, retuse, bicallose with three short keels in front.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek αγκυα- anchor, and τυλος- callus, or swelling, in reference to the anchor-shaped swelling on the lip in front of the callus.

Authors: E. Hágsater & E. Santiago Illustrator: R. Jiménez M. Editors: E. Hágsater & L. Sánchez S.
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EPIDENDRUM ANDREETTAE Hágsater & Dodson

Plate 705

EPIDENDRUM ANDREETTAE Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Azuay: Hort. Paute, photographed (color slides) 24 November 1988, ***Angel M. Andreetta s.n.*** Holotype: the Illustration, AMO! Xerox copies: AMES! COL! K! MO! QCA! QCNE! SEL! USM!

Epidendro oxapampensi Hágsater simile sed columna geniculata ovarium respectu, floribus majoribus, segmentis floralibus acuminatis, petalis 5-nervatis, labello ad basem orbiculari, ad apicem longe triangulari divergens.

Hierba colgante, cespitosa, 12 cm de alto. **Raíces** basales, escasas, carnosas, delgadas, blancas. **Tallos** agregados, cortos, cubiertos por brácteas papiráceas; vainas foliares subinfundibuliformes, finamente estriadas, 5 x 0.16 cm. **Hojas** 2 por tallo, agregadas en el ápice de los mismos, alternas, colgantes; lámina elíptica, ápice subagudo, margen entero, coriácea, lisa, de color verde azuloso glauco, 6-8 x 3-4.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, sésil, colgante, pauciflora, florece una sola vez, 6 cm de largo (incluyendo la flor); pedúnculo sésil. **Brácteas florales** no vistas. **Flores** 2, simultáneas, grandes, color verdoso con rayas moradas, labelo con puntos morados; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 22 mm de largo. **Sépalos** extendidos, libres, deltados, ápice acuminado, 7-nervados, margen entero, 36 x 15-17 mm; los **laterales** ligeramente oblicuos. **Pétalos** extendidos, ovados, acuminados, 5-nervados, margen entero, 30 x 12 mm. **Labelo** unido de manera oblicua a la columna, entero, orbicular en la base, angostamente triangular en el ápice, cóncavo, margen denticulado eroso en la base a entero en el ápice, 30 x 0.6-14 mm; ecalloso y desprovisto de quillas. **Columna** recta, gruesa, formando un ángulo de 135° con respecto al ovario, 12 mm de largo. **Clinandrio** reducido, entero. **Antera** reniforme. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** no visto. **Cápsula** no vista.

Pendent, caespitose **herb. Roots** basal, fleshy, thin. **Stems** aggregate, short, covered by papery bracts. **Leaves** 2 per stem, aggregate at the apex, alternate, pendent; blade elliptic, apex subacute, margin entire, coriaceous, smooth, glaucous blue-green. **Inflorescence** apical, racemose, sessile, pendent, flowering only once. **Flowers** 2, simultaneous, large, greenish with purple lines, lip blotched with purple. **Ovary** terete, thin. **Sepals** spreading, free, deltoid, acuminate, 7-veined, margin entire; the **laterals** slightly oblique. **Petals** spreading, ovate, acuminate, 5-veined, margin entire. **Lip** obliquely united to the column, entire, base orbicular, apex narrowly triangular, concave, margin denticulate-erose at the base, the apical triangle entire; ecallose and without keels. **Column** straight, thick, forming a 135° angle with the ovary. **Clinandrium hood** reduced, entire. **Anther** reniform. **Rostellum** apical, slit.

OTHER SPECIMENS: None seen.

OTHER RECORDS: PERU: Pasco: Oxapampa, Hacienda San Jorge along Río Gramazu, 1800-2000 m, col. J. Del Castillo, 13 VII 1996, *Bennett 7656.* Published illustration IOP: 472. Voucher said to be deposited at USM. [The illustration shows three flowers of different sizes. It is not clear whether they correspond to the same plant or various plants. In any case, *Bennett 1887*, also cited in the text corresponds to *E. sophronitis* Linden & Rchb. f. AMES!] *Epidendrum sophronitoides* Linden & Rchb. f., in Bot. Mag. 6314. 1877. Probably **ECUADOR:** as *Epidendrum sophronitis* Rchb. f., 7-8000 ft, June 1877, *Lehmann*, cited in Reichenbach f., G. H., 1878, Otia Bot. Hamburgensis 11.

DISTRIBUTION AND ECOLOGY: Known only from the single cultivated plant, probably from Azuay in southern Ecuador, at higher elevations. Flowering in November.

RECOGNITION: *Epidendrum andreettae* belongs to the Kalopternix Group, characterized by the erect or pendant, 1 or 2-leaved pseudobulbs, glaucous leaves, resupinate flowers with a wide-trullate lip, the margin fleshy-erose. The species is recognized by the pendant habit, single, long leaves, the column geniculate with the ovary, at a 135° angle, and large flowers with acuminate segments, the petals 5-veined; the coloration of the segments is produced by dots in straight lines on the sepals, partially on the petals, and loosely covering the disc of the lip. It is vegetatively very similar to *Epidendrum oxapampense* Hágsater which has smaller flowers, acute floral segments and, the lip short apiculate, the petals 3-veined and the coloration of the flowers green with a single, large pink to maroon blotch on the lip. *Epidendrum sophronitis* Linden & Rchb.f. has an upright habit, a single cuneate, elliptic, acute leaf per pseudobulb, 37 x 15 mm, and the acuminate sepals are 12 mm long.

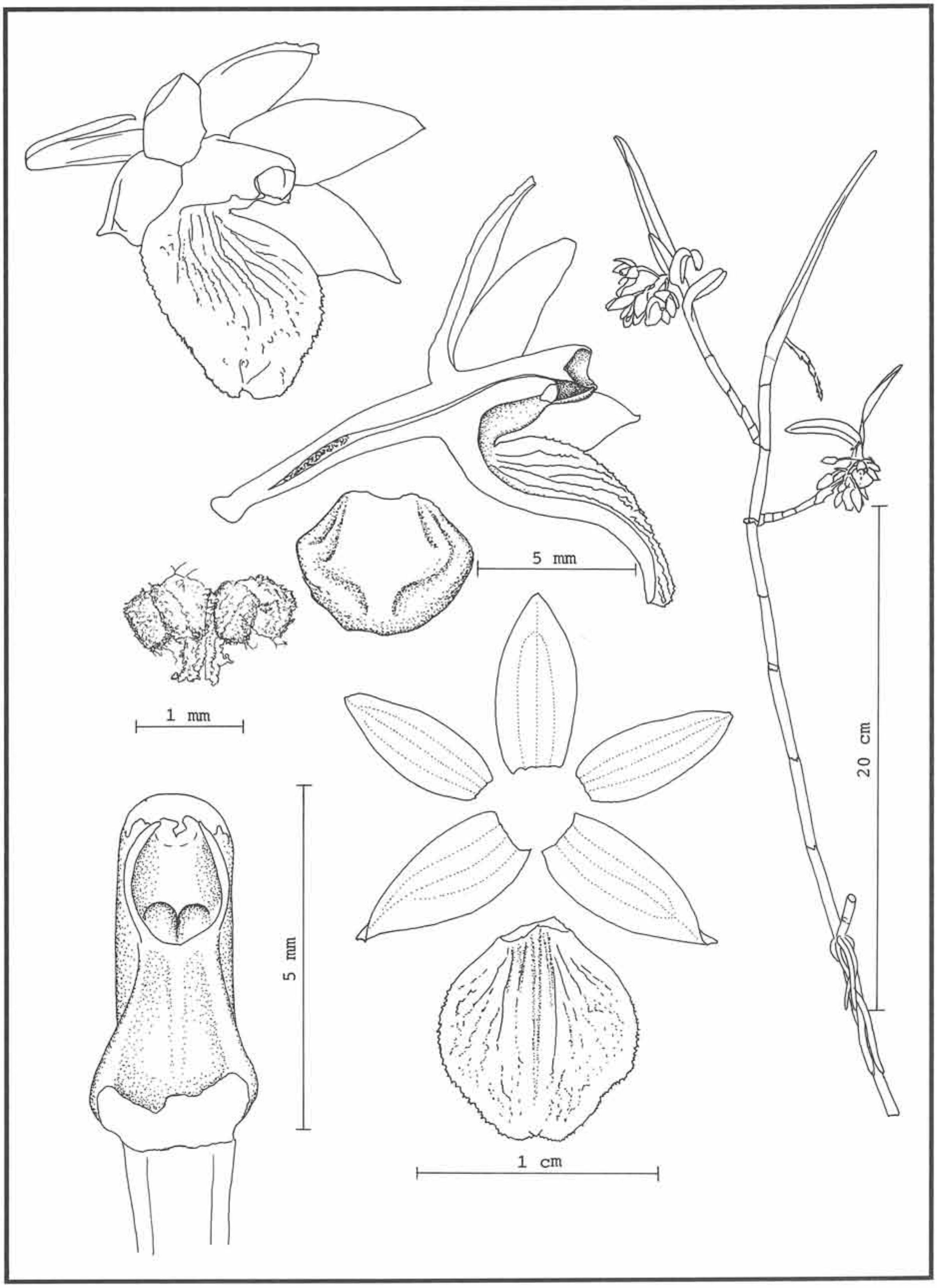
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Father Angelo M. Andreetta, Salesian priest, born in Italy, lives in Paute, near Cuenca, Ecuador, where he has directed a school of agriculture. A long time orchid enthusiast, he convinced the Portilla brothers about the possibility of establishing an orchid nursery for the propagation of the rich Ecuadorean orchid flora for commercial purposes, thus giving rise to ECUAGENERA. He has been a long time friend of both authors, and provided the type material.



REFERENCES: Bennett, D. E. & E. A. Christenson, 1998. *Epidendrum sophronitis* Linden & Rchb. f., Icones Orch. Peruv.: pl. 472.

Authors: E. Hágsater & C. H. Dodson **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM AREVALOIDES Hágsater & Dodson

Plate 706

EPIDENDRUM AREVALOIDES Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Napo: Baeza-Tena, 2 km después de Cosanga, Cordillera de Guacamayo, 1990 m, epífita, col. 4 dic. 1986, prensado 19 jun. 1987, ***E. Hágsater & C. H. Dodson 8838.*** (Illustration voucher). Holotype: QCNE! Isotype: AMO!

Epidendro arevaloi (Schltr.) Hágsater simile sed inflorescentia magis florifera, floribus minoribus, ovario breviore, petalis anguste ovatis angustioribus apice obtusis, labello 6-7 carinas erosas et inconspicuas ferenti, ad apicem leviter retuso, columna breviore distinctum.

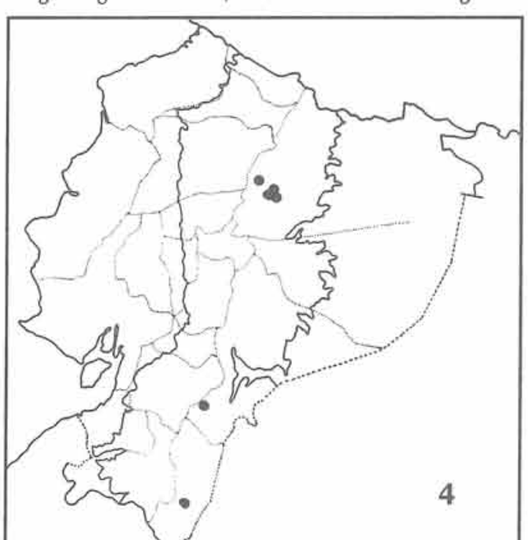
Hierba epífita y terrestre, ramificada, hasta 52 cm de alto. **Raíces** abundantes en la base y escasas en algunas ramificaciones, carnosas, delgadas, blancas, 0.5-1.5 mm de grosor. **Tallos** ramificados, se producen varios tallos nuevos de los entrenudos apicales del tallo anterior, tipo caña, rectos, teretes, delgados, 5-26 x 0.1-0.26 cm. **Hojas** 4-9 por rama, más en el tallo inicial, distribuidas hacia la zona media apical de los tallos, alternas; vaina tubular, finamente estriada, 10-30 x 1.5-4.5 mm; lámina angostamente lanceolada, ápice bilobado a desigualmente bilobado, con una quilla dorsal baja, margen entero, lisa, 2.0-6.7 x 0.28-0.55 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, corta, racemosa, erecta a arqueada, florece una sola vez, 1.5-3.5 cm de largo; pedúnculo corto, terete, delgado, 0.5-1 cm de largo, ocasionalmente provisto en la parte basal de una bráctea semejante a las florales, triangular, acuminada, 4 mm de largo. **Brácteas florales** iguales o más cortas que el ovario, triangulares, largamente acuminadas, 3-7 mm de largo. **Flores** 8-17, simultáneas, color verde a verde amarillento o pardo rojizo, raramente rosado, sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 8-13 mm de largo. **Sépalos** extendidos, libres, angostamente elípticos, ápice subagudo, 3-nervados, margen entero, 7.5-11 x 2.8-3.8[4.3] mm; los **laterales** ligeramente oblicuos, aristados. **Pétalos** extendidos, libres, angostamente ovados, obtusos, diminutamente apiculados, 3-nervado, margen ligeramente eroso en la zona apical , 6.7-10 x 2.4-3.0[3.8] mm. **Labelo** libre, entero, ovado a suborbicular, margen denticulado; ecalloso; provisto de 6-7 carinas erosas e inconspicuas radiando desde la base del labelo hacia la parte media del disco, las centrales ligeramente más largas, la superficie del disco fuertemente ornamentada hacia la zona apical con tricomas ancistrosos, 9.0-13.0 x 7.0-10 mm. **Columna** recta, delgada, provista de un par de alas laterales angostas que se extienden desde la base hasta la parte media ventral, 5-6 mm de largo. **Clinandrio** corto, entero. **Antera** reniforme, 4-locular. **Polinios** 4, ovoides, caudículas granulosas algo más largas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** ausentes. **Nectario** incipiente, una cámara amplia formada por la base de la columna y labelo. **Cápsula** no vista.

Epiphytic and terrestrial, branching **herb. Roots** abundant at the base of the plant, scarce at branches. **Stems** branching, new stems produced from the apical internodes of the previous stem, cane-like, straight, terete, thin. **Leaves** 4-9 per branch, distributed along the apical half of the stems, sheath tubular, finely striated; blade narrowly lanceolate, apex bilobed to unequally bilobed, margin entire. **Inflorescence** apical, short, racemose, erect to arching, flowering only once. Flowers 8-17, simultaneous, green to green-yellowish, reddish rarely pinkish. **Floral bracts** as long as to shorter than the ovary, triangular, long-acuminate. **Ovary** terete, thin. **Sepals** spreading, free, narrowly elliptic, acute, margin entire, 3-veined. **Petals** spreading, free, narrowly ovate, obtuse, minutely apiculate, the apical margin slightly erose, 3-veined. **Lip** free, entire, ovate to suborbicular, margin denticulate, ecallose, disc provided with 6-7 erose and inconspicuous radiating keels, apical surface of the lip ornamented with ancistrous trichomes. **Column** straight, thin, 5-6 mm long, provided with narrow lateral wings along the basal half. **Clinandrium hood** short, entire. **Nectary** a wide, open chamber formed by the base of the column and lip

OTHER SPECIMENS: ECUADOR: Morona Santiago: Above Sigsig, 2780 m, 6 V 1981, *Kuhn58,* SEL! Área de Bosque Vegetación Protectora Tambillo, 2440 m, 15 IV 2001, *Suin1001,* AMO! **Napo:** Sierra Azul (Agrícola Industrial Río Aragón), 2500 m, 21 VI 1992, *Álvarez 558,* QCNE! Quito-Tena, Cosanga, 1850 m, 17 VI 1983, *Dodson 14016,* SEL! (Illustration voucher) Ibid. *Dodson 14017,* SEL! Km 11 Baeza to Tena, 1800 m, 30 VI 1985, *Dodson 15897,* QCNE! MO! Ibid. 2200 m, 29 V 1986, *Dodson 16441,* RPSC! Papallacta to Cuyuja, road Quito to Baeza, 2500 m, VI 1989, *Hirtz 4265,* RPSC! Tena to Baeza, in Cordillera Guacamayo, 1800 m, III 1987, *Suarez 201,* MO! **Zamora Chinchipe:** Yangana toward Valladolid, 2450 m, III 1984, *Luer 9580,* SEL! (illustration voucher)

DISTRIBUTION AND ECOLOGY: Eastern slope of the Andes in central Ecuador, in the provinces of Napo, Morona-Santiago and Zamora Chinchipe between 1850 and 2780 m altitude. Terrestrial and epiphytic in wet forest. Flowering from March to June.

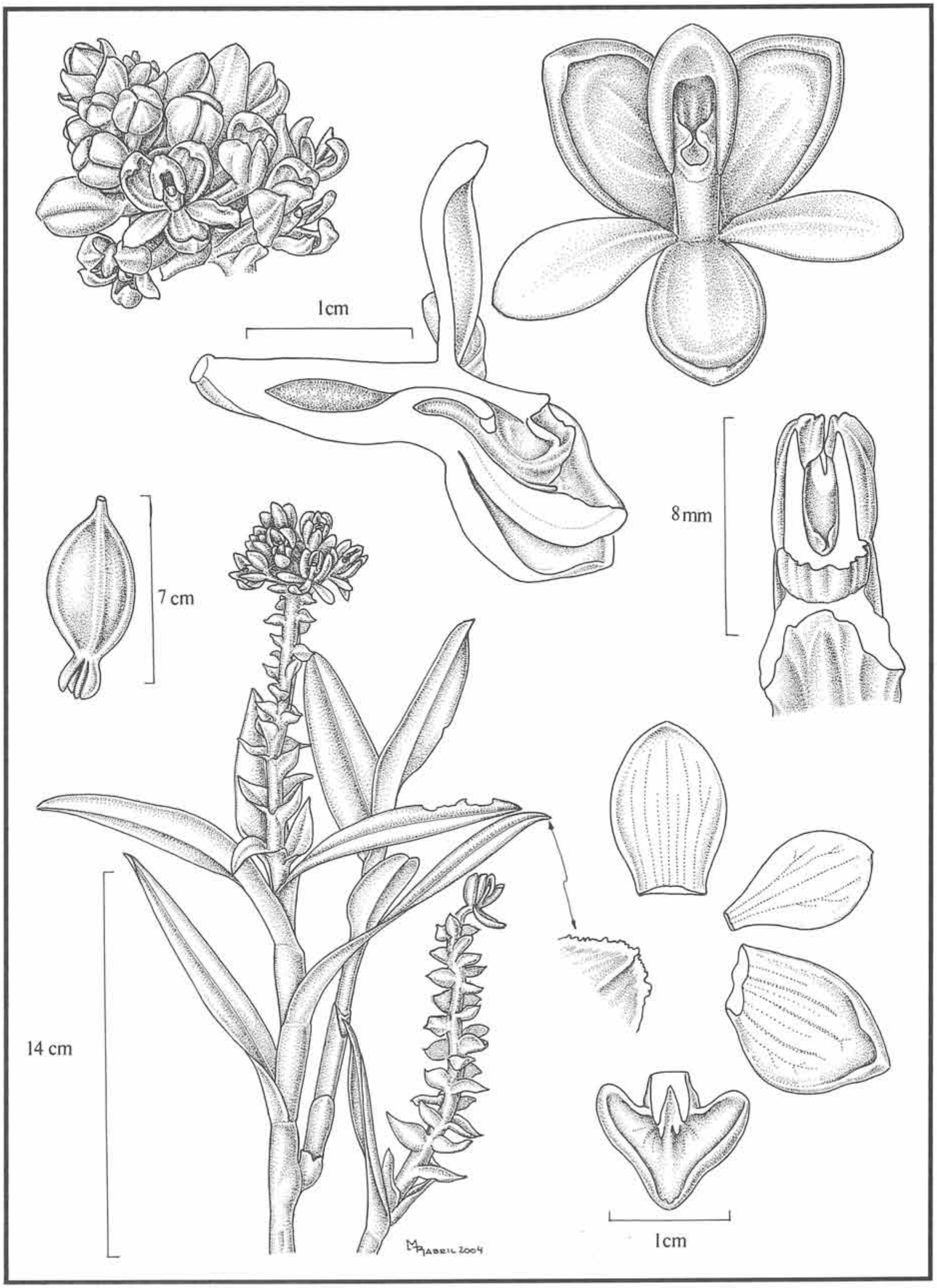
RECOGNITION: *Epidendrum arevaloides* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose without or with 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The new species is recognized by the thin, terete stems, branching towards the apex, short, arching inflorescence, narrowly lanceolate leaves distributed towards the apical half of the stems, obtuse petals 6.7-10 mm long, sepals 3-veined, lip ovate to suborbicular, ornamented with ancistrous trichomes on the apical half, thin, straight, free column with a pair of narrow lateral wings along the basal half; the column is 5-6 mm long. It is similar to *Epidendrum arevaloi* which has larger plants, longer leaves, the veins of the floral segments marked red, larger flowers, the acute petals, the sepals [12]15-16 mm long, the lip provided with 9-10 keels evidently serrulate towards the apical half. *Epidendrum cochabambanum* Dodson & Vásquez (syn. *Epidendrum stenophyllum* Hágsater & Dodson) has linear, conduplicate leaves 2-3 mm wide, smaller flowers, narrowly linear-elliptic petals, the lip totally united to the column is provided with 5 laminar, smooth keels and the column thick and widened towards the apex. *Epidendrum microdiothoneum* Hágsater & Dodson has a glomerulate inflorescence, ventrally thickened ovary along the apical 2/3[rd], elliptic, petals 3-veined, the veins much branched, 3-lobed lip provided with 4 laminar keels, column short, 3 mm long. *Epidendrum heterothoneum* (Rchb. f. & Warsc.) Hágsater has larger flowers, the floral segments 15-16 mm long, 3-lobed lip totally united to the column which is thick and widened towards the apex. . *Epidendrum megalospathum* (Rchb. f.) Garay & Dunsterv., though belonging to a different group with a very different plant architecture and a prominent spathe, has a similarly free column.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the similarity of this species to *E. arevaloi*.

Author: E. Santiago **Illustrator: E. Hágsater** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM ARIASII Hágsater & Dodson

Plate 707

EPIDENDRUM ARIASII Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Tungurahua: Baños, Parque Nacional Llanganates. Páramo de Soguillas-Valle de los Frailejones, 1°10´S 78° 16´W, 3660 m, 12 October 1998, ***Homero Vargas, J. C. Ronquillo & N. Granda 2794.*** Holotype: QCNE! (Illustration voucher, pro parte, flowers.)

Epidendro xylostachyo Lindl. simile sed floribus aurantiaco-rubellis, segmentis floralibus proportione latioribus, labello ad basem cordiformi recedens.

Hierba epífita, monopodial, ramificada, hasta 300 cm de alto. **Raíces** no vistas. **Tallos** erectos, ramificados cuando maduros, tipo caña, teretes, hasta 150 x 1.05 cm; las ramificaciones más cortas, 15-19 x 0.6-1 cm. **Hojas** en el tallo principal no vistas, 5-6 en las ramas, distribuidas a lo largo de los 2/3 apicales del tallo, alternas, extendidas, más o menos perpendiculares al tallo, articuladas, coriáceas; vainas tubulares, en seco ligeramente infundibuliformes, estriadas, finamente rugosas, 2-3.3 x 0.6-10.5 cm; lámina elíptico lanceolada, ápice subredondeado, con una quilla dorsal baja, margen diminutamente crenado, 4-11 x 1.4-2.3 cm. **Inflorescencia** apical, erecta, florece una sola vez, racemosa, raramente con un racimo basal corto, 10-15 cm de largo; pedúnculo corto, grueso, desprovisto de brácteas, 12 mm de largo; raquis oculto totalmente por las brácteas florales. **Bráctea espatácea** ausente. **Brácteas florales** prominentes, de la mitad del largo del ovario o casi tan largas como éste, gradualmente más cortas, anchamente ovado triangulares, extendidas, 7-17 x 5-9 mm. **Ovario** terete, grueso, no inflado, no ornamentado, 14-19 mm de largo. **Flores** ca. de 45, no resupinadas, sucesivas, 3-6 abiertas a la vez, los botones desarrollándose progresivamente, carnosas, de color anaranjado rojizas; sin datos de fragancia. **Sépalos** libres, extendidos, cóncavos, obovados, 7-nervados, margen entero, involuto, 14 x 9.6-10.4 mm; el **dorsal** redondeado en el ápice; los **laterales** subagudos. **Pétalos** libres, extendidos, ligeramente cóncavos, anchamente espatulados, ápice redondeado, margen extendido, entero, 13.2 x 8 mm. **Labelo** triangular, cordado en la base, ápice subagudo, margen ligeramente involuto, entero; carnoso, cuculado en posición natural, los lados sin abrazar el ápice de la columna, 10 x 12.4 mm; bicalloso, los callos muy pequeños. **Columna** recta, gruesa, 8 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/5 del largo de la cavidad estigmática. **Antera** no vista. **Polinios** no vistos. **Nectario** poco profundo, apenas penetrando el ovario, liso, no inflado. **Cápsula** elipsoide, 55 x 3.3 mm; pedicelo muy corto, 7 mm de largo; cuello apical ausente.

Epiphytic, monopodial, branching, **herb. Stems** erect, branching when mature, cane-like, terete, the branches short. **Leaves** 5-6 on the branches, distributed along the apical 2/3 of the stem, alternate, spreading, more or less perpendicular to the stem, articulate, coriaceous; sheaths tubular, somewhat infundibuliform, striated and minutely rugose when dry; blade lanceolate-elliptic, apex somewhat rounded, low dorsal keel, margin minutely crenate. **Inflorescence** apical, erect, flowering only once, racemose; peduncle short, thick, without bracts; rachis totally hidden by the floral bracts. **Floral bracts** prominent, half as long to nearly as long as the ovary, the apical ones gradually shorter, widely triangular-ovate, spreading. **Ovary** terete, thick, smooth. **Flowers** about 45, non-resupinate, successive, 3-6 open at one time, the buds developing progressively, fleshy, orange-red in color. **Sepals** free, spreading, concave, obovate, 7-veined, margin entire, involute; the **dorsal sepal** rounded at the apex, **laterals** subacute. **Petals** free, spreading, somewhat concave, widely spathulate, apex rounded, margin spreading, entire. **Lip** triangular, base cordate, apex subacute, margin slightly involute, entire; fleshy, cucullate in natural position; bicallose, the calli very small. **Column** straight, thick. **Clinandrium hood** reduced, margin entire. **Rostellum** apical, slit. **Nectary** shallow, barely penetrating the ovary, smooth. **Capsule** ellipsoid; pedicel very short; lacking an apical neck.

OTHER SPECIMENS: ECUADOR: Tunguragua: Cordillera de los Llanganates, Cerro Hermoso, 3400 m, 10 II 1994, collected by D. Arias Mantilla, *Dodson 19106*, MO!

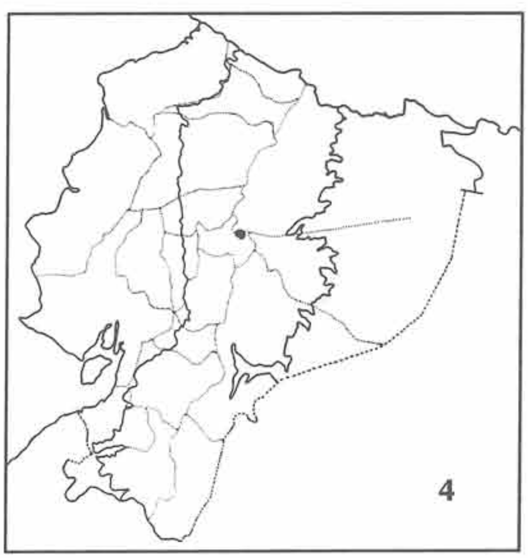
OTHER RECORDS: ECUADOR: Tunguragua: Cordillera de los Llanganates, Cerro Hermoso, 3400 m, 10 II 1994, *Dodson 19106*, slide, AMO! (Illustration voucher, pro parte, the inflorescence.) Cordillera de los Llanganates, *Lou Jost s.n.*, 2003, digital image, AMO! (Illustration voucher, pro parte, habit.)

DISTRIBUTION AND ECOLOGY: Known only from the Llanganates Range (border of Napo and Tunguragua provinces) on the eastern slopes of the Andes in Central Ecuador at 3400-3660 m altitude. Flowering from October to February, probably throughout the year.

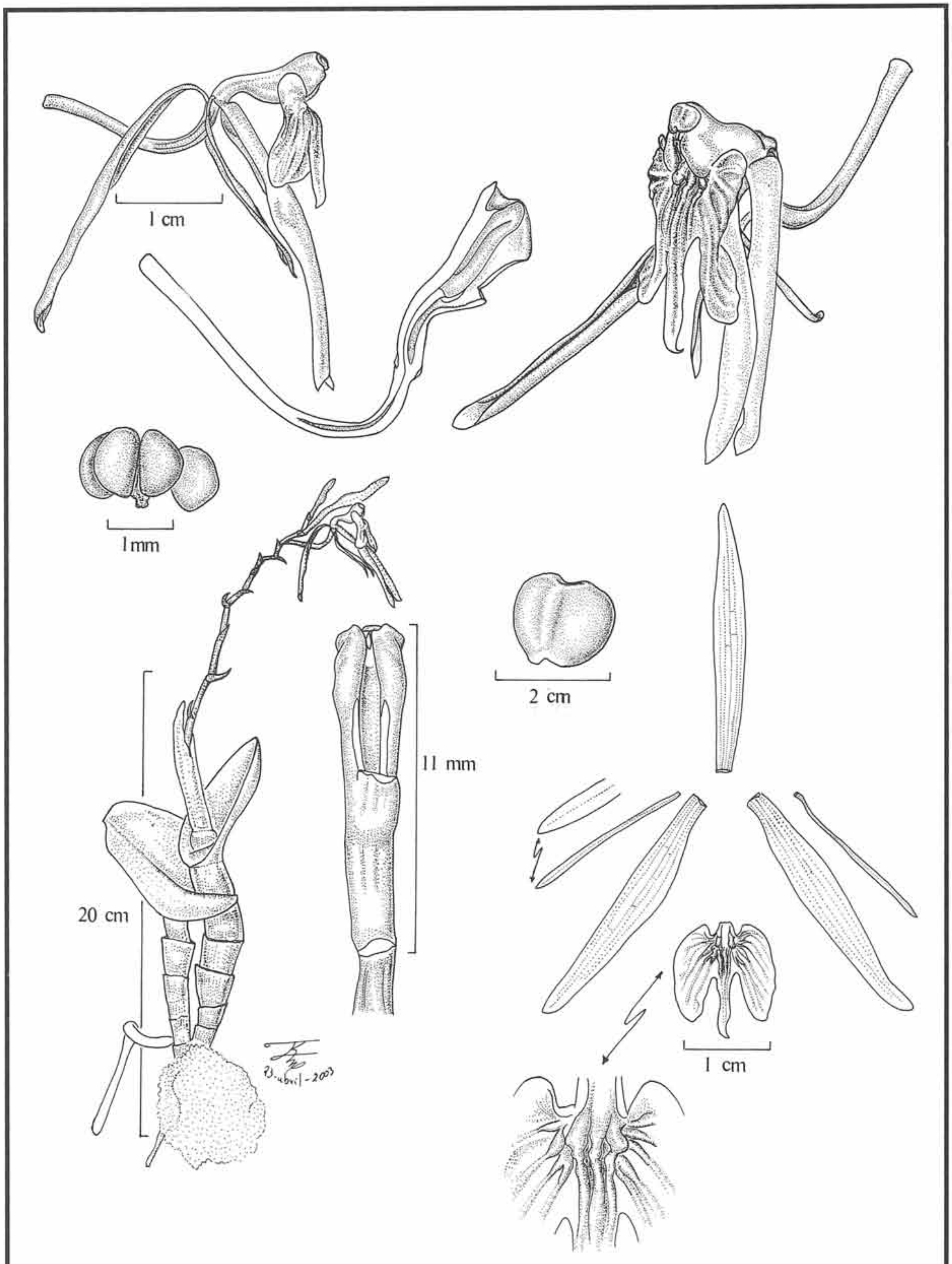
RECOGNITION: *Epidendrum ariasii* belongs to the Macrostachyum Group and Subgroup which is characterized by the monopodial stems, branching above, the apical, erect, racemose, cylindrical inflorescence with non-resupinate, fleshy flowers, the lip entire, triangular to cordiform, with small calli and the nectary usually puberulose in front of the stigmatic cavity. The species is recognized by the orange-red, successive flowers on an erect, compact, raceme, the nectary does not show the pubescent surface usual in the group. It closely resembles *Epidendrum xylostachyum* Lindl. which has green flowers and is found on the Cordillera Central in Colombia and ranges along the provinces of Antioquia to Nariño.

CONSERVATION STATUS: DD. Data deficient. Apparently highly endemic, but locally common.

ETYMOLOGY: In honor of D. Arias Mantilla who first brought the species to the attention of the authors.



Authors: E. Hágsater & C. H. Dodson **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM ATONUM Hágsater & Dodson

Plate 708

EPIDENDRUM ATONUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Morona-Santiago: Gualaquiza, Chiguinda, vía Bermejos, epífita, 1500-1800 m, Hort. Ecuagenera, collected and grown by *Hugo Medina Troyani,* pressed 8 March 2003, ***E. Hágsater 13831***. Holotype: The Illustration, QCNE! Isotype: flower in liquid, AMO! (Illustration voucher). Copies of illustration at: AAU! AMES! AMO! GB! K! LOJA! MO! SEL! QCA! S! USM!

Epidendro dalstromii Dodson simile sed habitu minore, caulibus ancipitiis, inflorescentia racemosa flexuosa, floribus successivis, sepalis petalisque descendentibus, labello profunde trilobato ad discum carinas radiantes prominentes ferenti differt.

Hierba epífita, cespitosa, erecta, 26 cm de alto. **Raíces** basales, carnosas, gruesas, blanco verdosas, 4 mm de grosor. **Tallos** sencillos, tipo caña, ancipitosos, anchos, sinuosos, 10-11.2 x 0.8-1.5 cm. **Hojas** 2-4, distribuidas hacia la mitad apical del tallo, alternas, suberectas, coriáceas, lisas; vaina tubular, ancipitosa, 11-15 x 8-15 mm; lámina ovado elíptica, redondeada, con una quilla dorsal baja, margen entero, amplexicaule, cóncava en posición natural, 6.2-6.7 x 3.5-5.0 cm. **Bráctea espatácea** 1, tubular, ancipitosa, aguda, papirácea, 5.6 x 0.8 cm. **Inflorescencia** apical, racemosa, pauciflora, ligeramente arqueada, 14.5 cm de largo; pedúnculo alargado, terete, delgado, cubierto casi en su totalidad por la bráctea espatácea, 4.5 cm de largo; raquis terete, delgado, flexuoso en la mitad basal, en zigzag hacia la mitad apical, 10 cm de largo. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares, acuminadas, gradualmente más pequeñas hacia el ápice, 3-11 mm de largo. **Flores** 10, sucesivas, una abierta a la vez, con un par de botones en diversos estados de desarrollo, resupinadas, de color blanco verdoso, sin fragancia. **Ovario** terete, delgado, no inflado, liso; en los botones florales recto; en la flor abierta recto en los 2/3 basales, fuertemente arqueado hacia arriba en el 1/3 apical, 17-22 mm de largo. **Sépalos** libres, linear elípticos, agudos, 5-nervados, lisos, margen entero, 30 x 5 mm; el **dorsal** reflexo descendente; los **laterales** descendentes, ligeramente oblicuos. **Pétalos** libres, descendentes, lineares, agudos, 1-nervados, lisos, margen entero, 22 x 0.6 mm. **Labelo** unido a la columna de manera oblicua, trilobado, base cordada, margen entero, 12 x 11.7 mm; bicalloso, los callos pequeños; disco provisto de 9 quillas prominentes, radiales, las tres centrales levemente nodulosas, alargadas hasta la base del lóbulo medio, las laterales de cerca de la mitad del largo que las centrales, algunas bifurcadas en el ápice; lóbulos laterales angostamente ovados, 5 x 11 mm; lóbulo medio acicular, ondulado, 7 x 1 mm. **Columna** constreñida en el 1/3 basal, obcónica en los 2/3 apicales, subsigmoide, con un par de alas apicales ventrales, no involutas, 11 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, 1/5 del largo de la cavidad estigmática. **Nectario** corto, sin traspasar el perianto, delgado, no inflado, liso. **Cápsula** no vista.

Epiphytic, caespitose, erect **herb. Roots** basal, fleshy, thick, somewhat greenish. **Stem** simple, cane-like, ancipitose, wide, sinuous. **Leaves** 2-4, distributed along the upper half of the stem, alternate, coriaceous, smooth; sheath tubular, ancipitose; blade ovate-elliptic, rounded, with a low dorsal keel, margin entire, amplexicaul, concave in natural position. **Spathaceous bract** 1, tubular, ancipitose, apex acute, papyraceous. **Inflorescence** apical, racemose, few-flowered, somewhat arching; peduncle longer than the leaves, terete, thin, nearly totally covered by the spathaceous bract; rachis terete, thin, flexuous below, zigzag above. **Floral bracts** much shorter than the ovary, narrowly triangular, acuminate, gradually smaller. **Flowers** 10, successive, one open at a time, with a couple of buds in different stages of development, resupinate, greenish white, without fragrance. **Ovary** terete, thin, not inflated, smooth, in floral buds straight, in open flower the apex arched upwards. **Sepals** free, linear-elliptic, acute, 5-veined, smooth, margin entire; the **dorsal** sepal reflexed-pendulous, the **laterals** pendulous, slightly oblique. **Petals** free, pendulous, linear, acute, 1-veined, smooth, margin entire. **Lip** united obliquely to the column, 3-lobed, base cordate, margin entire; bicallose, the calli small, disc provided with 9 prominent keels, radiating, the three central keels somewhat nodulose, elongating to the base of the midlobe, the laterals about half as long, some split at the apex; lateral lobes narrowly ovate; midlobe sword-like, undulate. **Column** constricted towards the base, somewhat sigmoid, with a pair of non-involute, ventral wings. **Clinandrium hood** short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, subequal. **Rostellum** apical, slit. **Lateral lobes of the stigma** small, about 1/5th the length of the cavity. **Nectary** short, without penetrating the ovary, narrow, not inflated, smooth.

OTHER SPECIMENS: None seen.

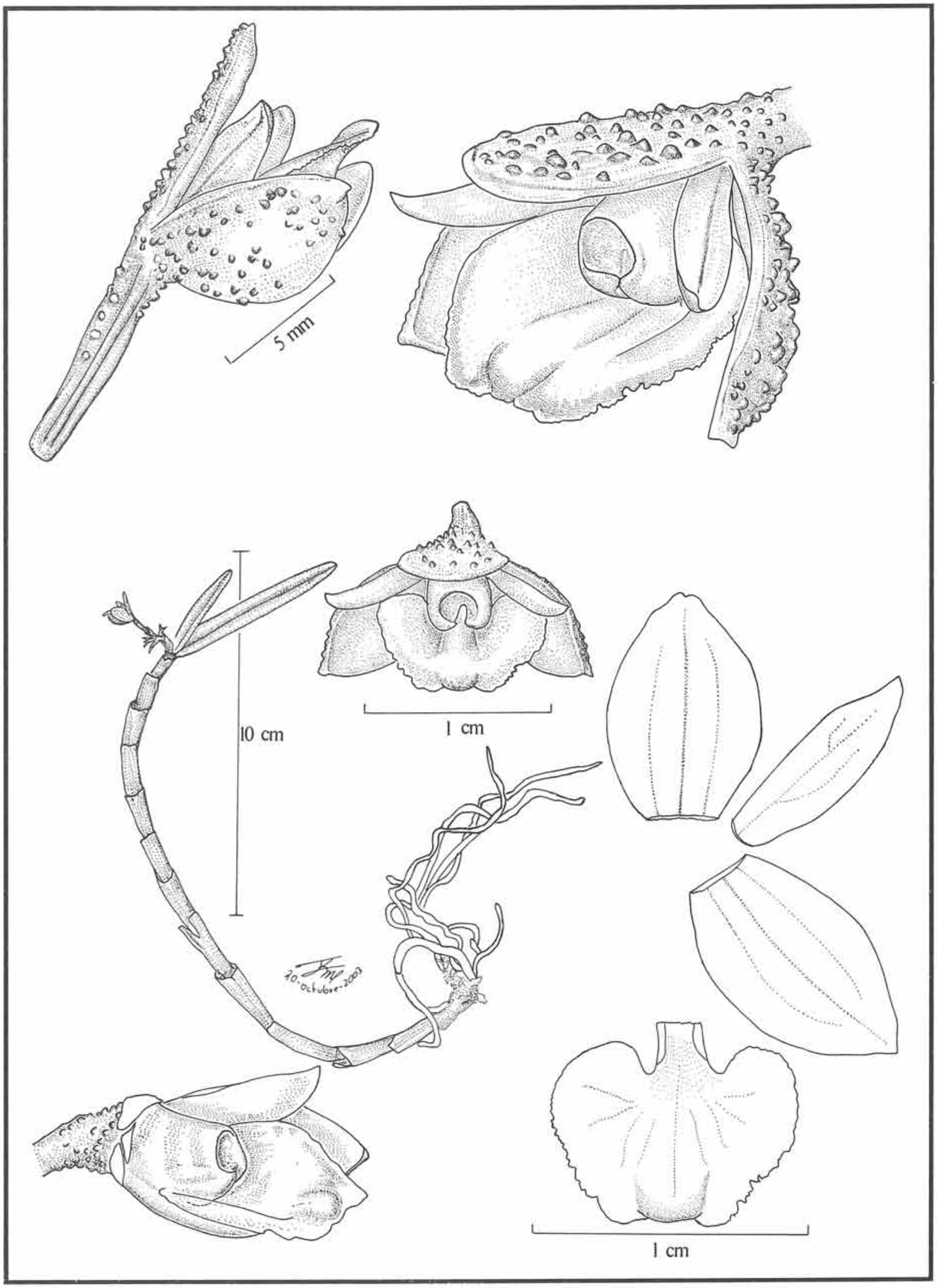
DISTRIBUTION AND ECOLOGY: Known only from the type. From the eastern slopes of the Andes in south central Ecuador, at about 1500-1800 m altitude. Flowering in March, probably over the second half of the year.

RECOGNITION: *Epidendrum atonum* belongs to the Excisum Group, Longiflorum Subgroup, characterized by the caespitose habit, erect stems with several fleshy leaves, a spathaceous bract, and the inflorescence with numerous star-like flowers, with narrow sepals and petals, and a prominent lip. The new species can be recognized by the short, ancipitose stems with roundish, amplexicaul, coriaceous leaves, the zigzag rachis with a single, successive flower, the pendulous sepals and petals and the deeply 3-lobed lip, with radiating, thickened keels. It is somewhat similar to *Epidendrum dalstromii* which has tall, terete, cane-like stems, with a pair of elliptic-orbicular, coriaceous leaves, an erect, lax-flowered, racemose to paniculate inflorescence with large, simultaneous flowers, the petals much reduced, hair-like, and a suborbicular lip at the end of an upright, sigmoid column; the lonely spathaceous bract is small. It may also be close to *Epidendrum nigricans* Schltr. which has short, thickened stems with two oval, fleshy leaves, an erect, racemose to paniculate inflorescence subtended by a spathaceous bract, with successive flowers of somewhat similar characteristics.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek ατονος - languid, weak, in reference to the hanging position of the sepals and petals which give the flower a languid appearance.



EPIDENDRUM AUREOGLOBIFLORUM Hágsater & Dodson **Plate 709**

EPIDENDRUM AUREOGLOBIFLORUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Between Jimbura and Zumba on the road Loja-Cariamanga-Zumba, 3300 m, epiphyte, 21 February 1986. ***A. Hirtz, C. Luer, J. Luer & A. Embree 2861.*** Holotype: MO! (Illustration voucher).

Epidendro globifloro F. C. Lehm. & Kraenzl. simile sed foliis longioribus, floribus luteis majoribus, sepalis ovarioque verrucas cum colore rubello suffusis ferentibus, petalis lineam rubram ferentibus, labello integro ecarinato recedit.

Hierba epífita, de 18 cm de alto. **Raíces** de la base de la planta, carnosas, delgadas, blancas, 0.8-1.6 mm de grosor. **Tallos** sencillos, probablemente ramificados cerca del ápice cuando maduros, tipo caña, teretes, gruesos, 18 x 0.4 cm. **Hojas** 10 en el tallo principal, 2 persistentes en el ápice, caedizas, alternas, articuladas; vaina tubular, estriada, 9-19 x 3-4.8 mm; lámina oblongo lanceolada, ápice bilobado, margen entero 2.8-5.3 x 0.4-0.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada, densa, corta, 1.0 cm de largo; pedúnculo corto, terete, desprovisto de brácteas, 3 mm de largo; raquis corto, oculto en su totalidad por las brácteas florales, 7 mm de largo. **Brácteas florales** de la mitad del largo del ovario, angostamente triangulares, acuminadas, 2-5 mm de largo. **Flores** 9, simultáneas, resupinadas, sépalos amarillo verdosos con verrugas pardo rojizas en la superficie dorsal, pétalos amarillos con la vena teñida de rojizo en la superficie dorsal, labelo amarillo; sin datos de fragancia. **Ovario** terete, delgado, verrugoso hacia la mitad apical, no inflado, 9 mm de largo. **Sépalos** entreabiertos, libres, carnosos, elípticos, subagudos, 3-nervados, margen entero, dorsalmente verrugosos, 8.3-9.4 x 5.2-5.6 mm. **Pétalos** entreabiertos, libres, carnosos, oblongo lanceolados, agudos, 1-nervado, la nervadura cortamente ramificada, margen entero, lisos, 8.3 x 2.4 mm. **Labelo** unido a la columna de manera oblicua, entero, subreniforme, base profundamente cordada, margen eroso, ápice anchamente mucronado; ecalloso y desprovisto de quillas, 6.4 x 11 mm. **Columna** gruesa, recta, con un par de alas carnosas en el ápice no involutas, 5 mm de largo. **Clinandrio** corto, margen entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** no visto. **Capsula** no vista.

Epiphytic **herb. Roots** from the base of the plant, fleshy, thin. **Stems** simple, probably branching near the apex when mature, cane-like, terete, thick. **Leaves** 10 on the main stem, 2 persistent, alternate, articulate; sheaths tubular, striated; blade oblong-lanceolate, apex bilobed, margin entire. **Inflorescence** apical, racemose, arching, dense, short; peduncle short, terete; rachis short, totally hidden by the floral bracts. **Floral bracts** half as long as the ovary, narrowly triangular, acuminate. **Flowers** 9, simultaneous, resupinate, sepals greenish yellow with reddish brown warts dorsally, petals yellow with a reddish vein dorsally; lip yellow. **Ovary** terete, thin, verrucose towards the apical half. **Sepals** partly spreading, free, fleshy, elliptic, subacute, 3-veined, margin entire, dorsally verrucose. **Petals** partly spreading, free, fleshy, oblong-lanceolate, acute, 1-veined, the vein with short branches, margin entire, smooth. **Lip** obliquely united to the column, entire, subreniform, base deeply cordate, margin erose, apex widely mucronate; ecallose and without keels. **Column** thick, straight, with a pair of ventral, fleshy, non-involute wings. **Clinandrium hood** short, margin entire. **Rostellum** apical, slit.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type locality, in southern Ecuador near the summit of the Andes on the border with Peru, at 3300 m altitude. Flowering in February.

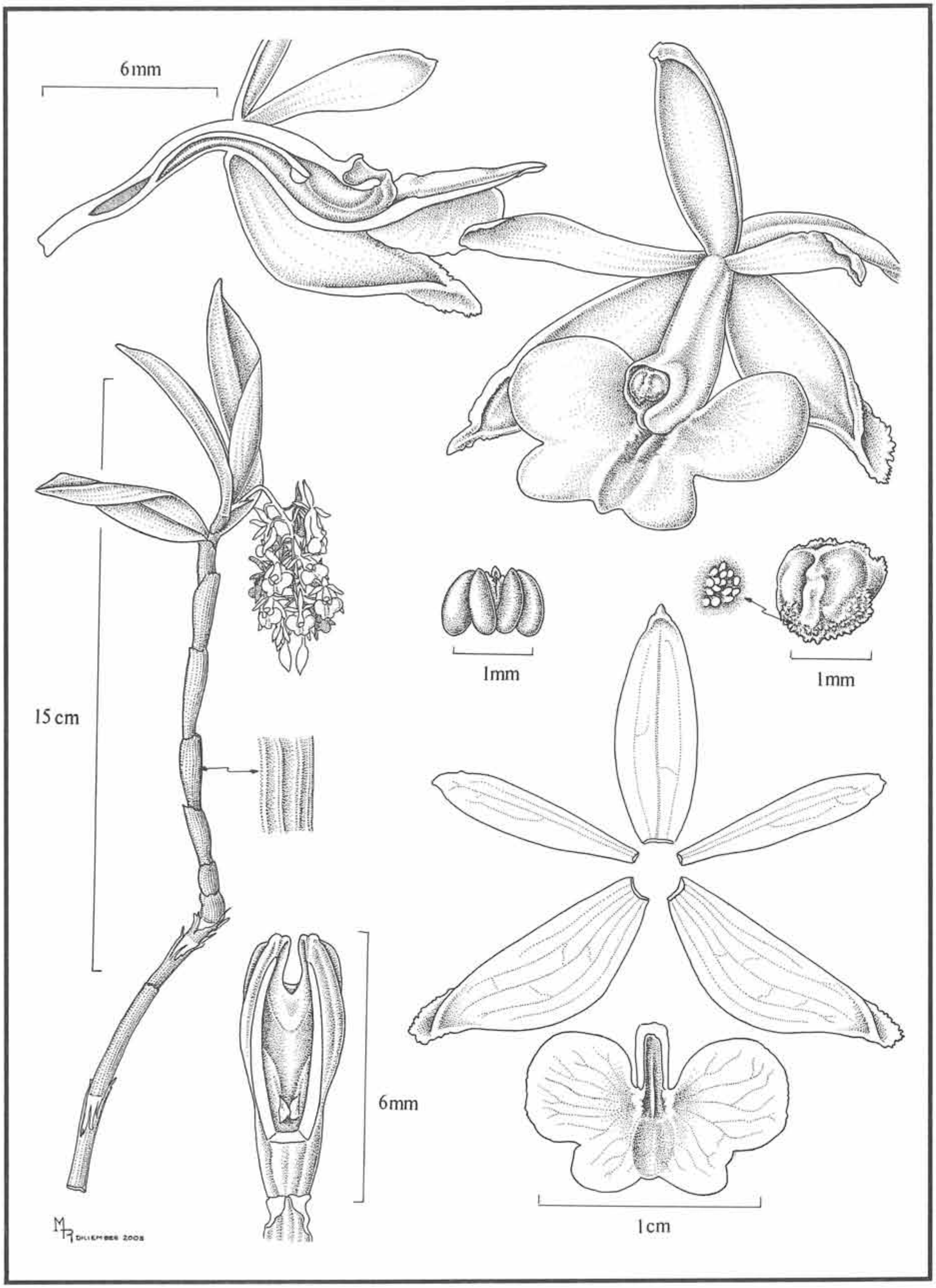
RECOGNITION: *Epidendrum aureoglobiflorum* belongs to the Diothonea Group and Subgroup, characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, without or with 1-10 thin, glabrous to erose keels, the column united to the lip from totally to obliquely to free. The species has oblong-lanceolate leaves 2.8-5.3 cm long, a very short inflorescence with greenish yellow sepals dorsally verrucose, yellow petals with a red line and a clear yellow lip without keels. *Epidendrum globiflorum* has shorter, oblong-ovate leaves, 1.5-3 cm long, greenish white flowers, the sepals dorsally pustulate and the lip 3-lobed with a triangular, tooth-shaped keel at the base of the midlobe. *Epidendrum pseudoglobiflorum* Hágsater & Dodson has trumpet-shaped, orange to vermilion-red flowers, the sepals connate at the base and the lip hexagonal-suborbicular with 7 keels. *Epidendrum podocarpophyllum* Schltr. has salmon red/yellow flowers, and shorter sepals 5 mm long, and the lip 3-keeled, these short and basal, with the surface of the disc verrucose, the midlobe subquadrate, apically bilobed, with the lobes truncate. *Epidendrum restrepoanum* A. D. Hawkes has widely spreading, red, dorsally pustulate sepals 7.7 mm long, with the lip entire to slightly 3-lobed with 7 keels.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *aureus*, golden yellow, and *globi* and *florum*, ball-like flowers, in reference to the bright yellow flowers closely related to *Epidendrum globiflorum*.



Author: E. Santiago Illustrator: R. Jiménez M. Editors: E. Hágsater & L. Sánchez S.
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EPIDENDRUM AYLACOTOGLOSSUM Hágsater

Plate 710

EPIDENDRUM AYLACOTOGLOSSUM Hágsater, *sp. nov.*

Type: COLOMBIA: Antioquia: cerca de Versalles, June 1957, without collector ***5515.*** Holotype: AMES! (Illustration voucher).

Epidendro renilabio Schltr. simile sed habitu sympodiali successivo laterali, caulibus brevibus, floribus in racemo e basi versus apicem aparientibus, petalis anguste oblanceolatis, labello in centro canaliculato divergens.

Hierba erecta, de crecimiento simpodial sucesivo lateral, de mucho más de 17 cm de alto. **Raíces** no vistas. **Tallos** sencillos, tipo caña, teretes, rectos, cada tallo nuevo se origina aparentemente de un entrenudo intermedio del tallo anterior, 10.5 x 0.22-0.35 cm. **Hojas** 3, agrupadas hacia el ápice de cada tallo; vaina ligeramente infundibuliforme en seco, estriada, 12-22 x 0.3-0.45 cm; lámina angostamente elíptica, aguda, margen entero, lisa, 5.5-7.0 x 1.2-1.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, arqueado nutante, densa, 5 cm de largo; pedúnculo lateralmente aplanado, ancipitoso, arqueado, desprovisto de brácteas, 1.6 cm de largo. **Flores** ca. 20, simultáneas, resupinadas, amarillas, sin datos de fragancia. **Brácteas florales** ligeramente más largas que el ovario, angostamente triangulares, acuminadas, gradualmente más pequeñas, 9-12 mm de largo. **Ovario** terete, delgado, liso, ligeramente incurvado hacia el ápice, 7.0-8.7 mm de largo. **Sépalos** entreabiertos, libres, angostamente ovado elípticos, aristados, margen extendido, entero, lisos, membranáceos, 10.9-11.1 x 3.7-3.9 mm; el **dorsal** 3-nervado; los **laterales** 5-nervados, oblicuos, con una quilla dorsal apical prominente y erosa. **Pétalos** entreabiertos, libres, angostamente oblanceolados, redondeados, 2-nervados, margen extendido, entero, 9 x 2 mm. **Labelo** unido a la columna, trilobado, profundamente cordado, margen entero, 6.6 x 11 mm, bicalloso, los callos bajos e inconspicuos; disco provisto de un canal central bajo y ancho, liso, con una quilla central baja, delgada y corta dentro del canal, entre los callos; lóbulos laterales orbiculares, 4.8 x 4.6 mm; lóbulo medio más pequeño, transversalmente oblongo rectangular, emarginado, bilobado, formando dos lóbulos semiovados, oblicuos, 2 x 6.8 mm. **Columna** sigmoide, ligeramente arqueada en los ¾ partes basales, el ápice fuertemente arqueado hacia arriba, obcónica hacia el ápice, 6 mm de largo. **Clinandrio** reducido, margen entero. **Antera** semiesférica, de superficie granular-verrugosa, con una quilla baja redondeada al frente, 4-locular. **Polinios** 4, iguales, angostamente obovoides; caudículas suaves y granulosas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando ½ del ovario, liso, no inflado. **Cápsula** no vista.

Erect, with successive lateral sympodial growth, **herb. Stem** simple, cane-like, terete, straight, each new growth produced apparently from a middle internode of the previous growth. **Leaves** 3, unequal, aggregate towards the apex of the stem; sheath slightly infundibuliform when dry, striated; blade narrowly elliptic, acute, margin entire, smooth. **Inflorescence** apical, flowering only once, racemose, nutant, dense; peduncle laterally compressed, ancipitose, arching. **Flowers** about 20, simultaneous, resupinate, yellow. **Floral bracts** slightly longer than the ovary, narrowly triangular, acuminate, gradually shorter. **Ovary** terete, thin, smooth, slightly incurved towards the apex. **Sepals** partly spreading, free, narrowly ovate-elliptic, subacute, smooth, membranaceous, aristate, margin spreading, entire; the **dorsal sepal** 3-veined; the **laterals** 5-veined, oblique, with a prominent dorsal, erose keel. **Petals** partly spreading, free, narrowly oblanceolate, rounded, 2-veined, margin spreading, entire. **Lip** united to the column, 3-lobed, deeply cordate, margin entire, bicallose, the calli low and inconspicuous; disc provided with a wide, low, smooth channel, and a short, low, narrow keel in between the calli; lateral lobes orbicular; midlobe smaller, transversely oblong, rectangular, emarginate, bilobed, forming two oblique, semiovate lobes. **Column** sigmoid, slightly arched in the basal ¾, apex strongly upturned, obconical. **Clinandrium hood** reduced, margin entire. **Anther** semispherical, the surface granular-verrucose, with a low, rounded keel in front, 4-celled. **Pollinia** 4, narrowly obovoid; caudicles soft and granulose. **Rostellum** apical, slit. **Nectary** penetrating half the ovary, smooth, not inflated.

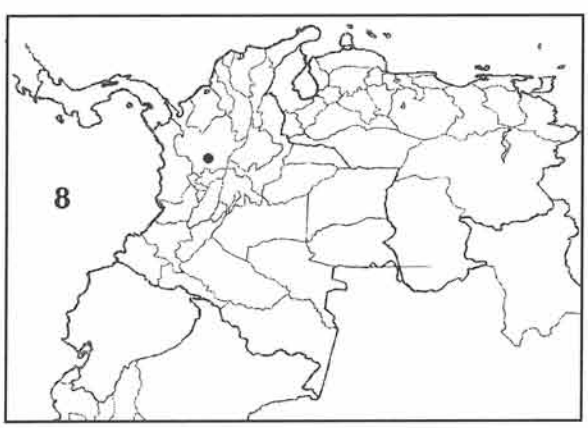
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, from the road south of Medellín, Antioquia in northern Colombia, atop the valley of the Cauca River, probably at around 1800 m altitude. Flowering in June.

RECOGNITION: *Epidendrum aylacotoglossum* belongs to the Arbuscula Group, Incomptum Subgroup, which is recognized by the stems produced from the middle of the previous stem, with few leaves aggregate near the apex, the racemose inflorescence and the fleshy, usually green to black flowers. The species is recognized by the yellow flowers, the ancipitose peduncle of the inflorescence, prominently dorsally keeled lateral sepals, narrowly oblanceolate petals and the 3-lobed lip, the basal lobes orbicular deeply cordate, the apical lobe short, wide, emarginate, forming two obliquely semiovate lobes and the wide channel running down the middle of the lip with a short, narrow keel in between the inconspicuous calli, and the sigmoid column. The relationships of this species are not clear, the vegetative structure appears to be that of successive lateral sympodial growths, and the ancipitose peduncle of the inflorescence are reminiscent of the plant illustrated by Dunsterville and Garay as *Epidendrum curtisii* Hawkes in the Illustrated Field Guide of Orchids of Venezuela pg. 218. However, the channeled lip, is more like that of *Epidendrum renilabium* Schltr. or *E. renilabioides* Hágsater & Dodson, though neither runs down the full length of the lip and both, however, have a monopodial growth pattern, with short branches and bilobed, subcoriaceous leaves and wide petals. The sigmoid, upturned apex of the column of the new species is unique.

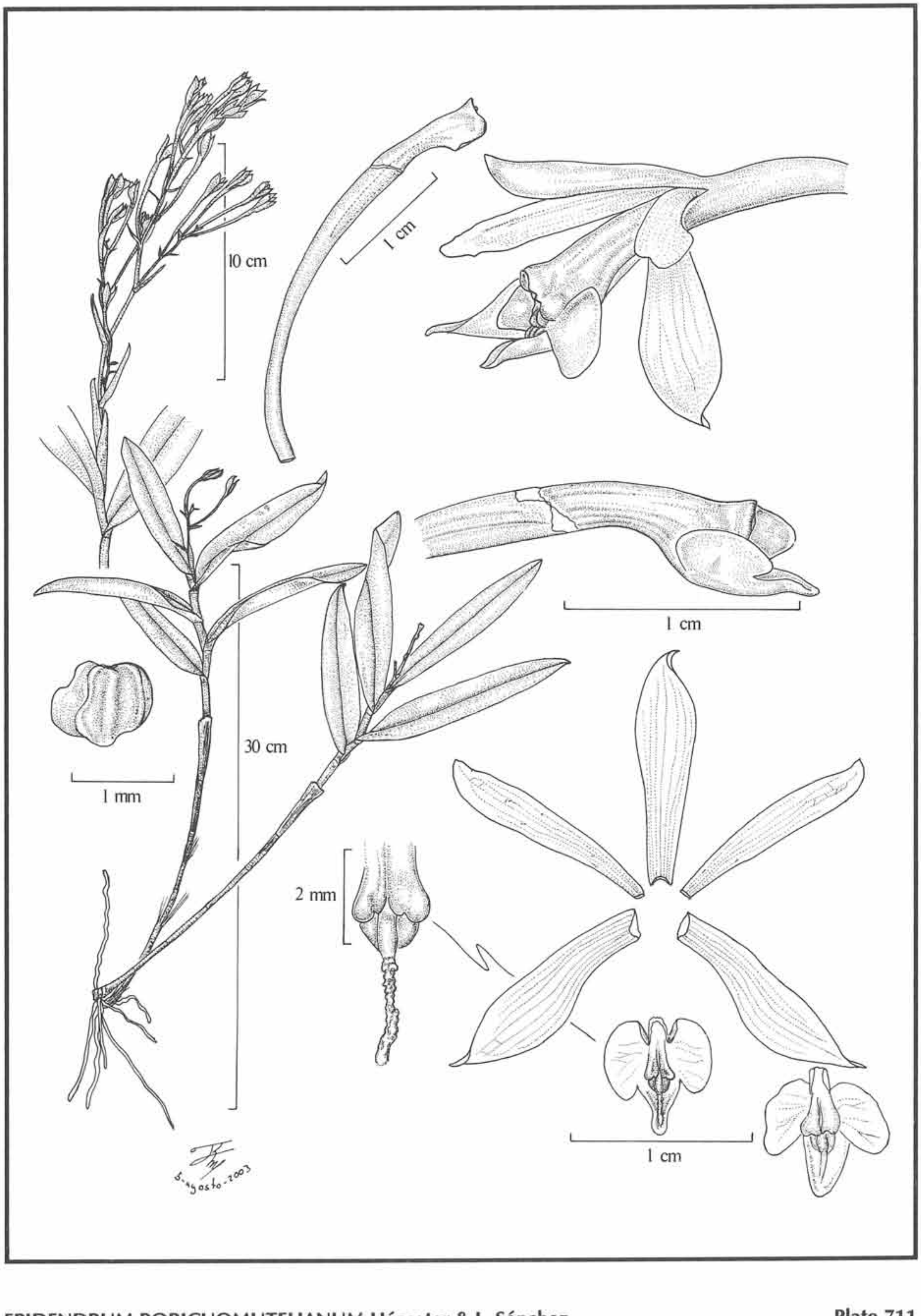
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek αυλακωτος- grooved, furrowed, and γλωσσα- tongue, in reference to the groove or channel that runs down the middle of the lip, where a thickened keel would normally be found.



Author: E. Hágsater **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM BORICUOMUTELIANUM Hágsater & L. Sánchez

Plate 711

EPIDENDRUM BORICUOMUTELIANUM Hágsater & L. Sánchez, *sp. nov.*

Type: Puerto Rico: Caribbean National Forest, along highway 930, 18°17'N, 65°47'w, ca. 800 m, dwarf forest, 5 January 1987, ***Brian M. Boom 6936***. Holotype: UPRRP! (Illustration voucher). Isotype: NY!

Epidendro muteliano Cogn. simile sed floribus aurantiaco-luteis cleistogamis, labelli lobulo medio triangulari et rotundato discrepat.

Hierba epífita, cespitosa, 20-37 cm de largo. **Raíces** basales, 1-2 mm de grosor. **Tallos** simples, tipo caña, lateralmente comprimidos, 13-23 cm de largo. **Hojas** 3-5, distribuidas hacia la 1/2-1/4 apical del tallo, dísticas; vaina tubular, lateralmente comprimida, finamente estriada, 0.8-3.2 x 0.3-0.6 cm; lámina angostamente elíptica, aguda, algo retusa, 65-10 x 1.5-2.2 cm. **Brácteas espatáceas** 1-2, conduplicadas, acuminadas, imbricadas; 1.1-3.5 x 0.3-0.4 cm. **Inflorescencia** apical, racemosa a paniculada; pedúnculo 2-7 cm de largo, en ocasiones con una bráctea conduplicada hacia la mitad del pedúnculo, semejante a la bráctea espatácea pero menor. **Brácteas florales** linear-lanceoladas, agudas, 4-9 mm de largo. **Flores** 4 a 20, entrecerradas o cleistógamas, amarillo-naranja, la columna rojo pardo; fragancia no registrada. **Ovario** dilatado hacia el ápice, terete, no ornamentado, 2.3-3.4 cm de largo. **Sépalos** oblanceolados, acuminados, carnosos, 7-nervados, 10-12 x 2-4 mm; los **laterales** oblícuos. **Pétalos** angostamente oblanceolados, agudos, 5-nervados, 9-10 x 1.8-2.3 mm. **Labelo** unido a la columna, trilobado, margen entero, 5 x 6 mm; bicalloso, los callos laminares; disco con 3 quillas, las laterales cortas, la media prominente, carnosas; lóbulos laterales transvesalmente ovado-elípticos, sinuados; lóbulo medio triangular, cortamente acicular, redondeado. **Columna** ligeramente arqueada, ensanchada hacia el ápice, 6-7 mm de largo. **Clinandrio** corto, entero. **Antera** subcuadrada, con una quilla alta, roma, 4-locular. **Polinios** no vistos. **Nectario** penetrando 1/3 del ovario, sin ornamentación. **Cápsula** no vista.

Epiphytic, caespitose **herb**. **Stems** simple, cane-like, lateraly compressed. **Leaves** 3-5, distributed towards the apical ½-1/4 of the stems, distichous; sheath tubular, laterally compressed, striate; blade narrowly elliptic, acute, somewhat retuse. **Spathaceous bracts** 1-2, conduplicate, acuminate. **Inflorescence** apical, racemose to paniculate; peduncle sometimes with an intermediate bract similar to the spathaceous bracts but smaller. **Floral bracts** lanceolate, acute. **Flowers** 4 to 20, partly opening to clistogamous, yellow-orange, the column brown-red. **Sepals** oblanceolate, acuminate, thick, 7-veined; the **laterals** oblique. **Petals** narrowly oblanceolate, acute, 5-veined. **Lip** united to the column, 3-lobed, margin entire; bicallose, the calli laminar; disc with 3, thick, short keels, the median longer; lateral lobes transversely ovate-elliptic, sinuate; midlobe triangular, short-acicular, rounded. **Column** somewhat arcuate, inflated at the apex. **Clinandrium hood** short, entire. **Anther** subquadrate, with a keel, 4-locular. **Nectary** penetrating 1/3 of the ovary, smooth.

DISTRIBUTION AND ECOLOGY: Endemic to the Cerro La Santa, Luquillo Mountains in eastern Puerto Rico. Known from montane regions, epiphytic on tree trunks in wet forest, at about 800 m altitude. Flowering from November to January.

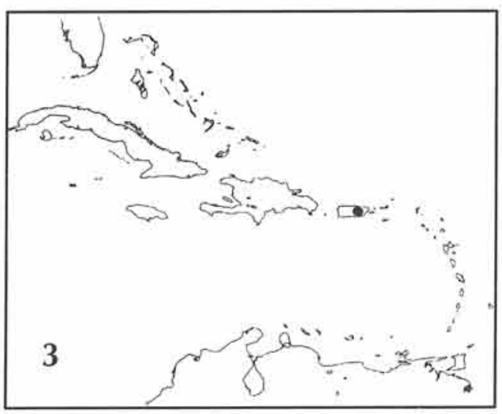
OTHER SPECIMENS: PUERTO RICO: Caguas & Cayey, Carite Forest Reserve, Cerro La Santa, roadside among communications towers, ca. 870 m, 23 XII 1984, *Ackerman 2055*, UPRRP! Cerro La Santa, 3000 ft, 15 I 1968, *Howard 16940*, AMES! Luquillo Mts, 20 IX 1964, *Wagner 688*, AMES! Luquillo Mts., 1 XII 1953, *Winters* AMES! Sierra de Luquillo, VI 1885, *Sintenis 1816*, W!

RECOGNITION: *Epidendrum boricuomutelianum* belongs to the Mutelianum Group characterized by the sympodial habit, simple stems, apical, paniculate inflorescence subtended by several imbricating bracts, 3-lobed lip and the petals as wide or wider than the sepals. The new species can be recognized by the caespitose habit, 3-5, narrowly elliptic leaves distributed towards the apex of the laterally compressed stems, erect racemose to paniculate inflorescence with the peduncle shorter than the apical leaf and the orange-yellow, clesitogamous flowers, the lip 3-lobed with the midlobe triangular, rounded. It is similar to *Epidendrum mutelianum* which has cream colored flowers, the apex of the column somewhat tinged purple and found on the lesser Antillies. They are both similar to *Epidendrum pallidiflorum* Hooker, but that species has greenish cream flowers with purple lines and a longer peduncle of the inflorescence (more than 10 cm long). They are somewhat similar to *Epidendrum patens* Sw., which has a longer peduncle (10 cm long), subrhombic, white flowers with purple dots at the base of the lip and the apex of the column, and the lip bilobed at the apex, the lobes divergent.

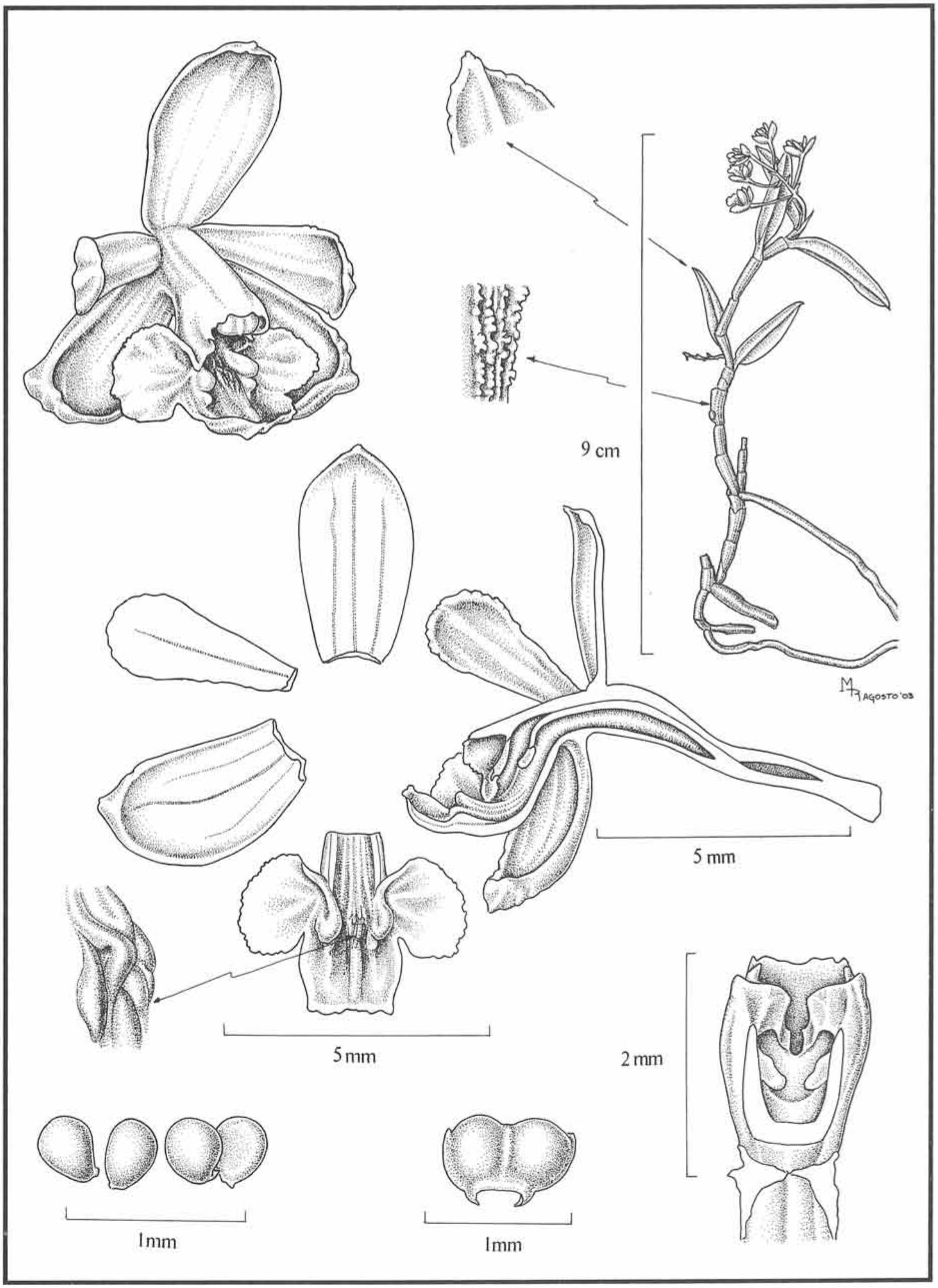
CONSERVATION STATUS: DD (data deficient). The area where the species has been found is in the protected Caribbean National Forest and the Carite Forest Reserve.

ETYMOLOGY: The epithet *boricuomutelianum* refers to the "Boricuas", the original inhabitants of the island of Puerto Rico before its discovery by Christopher Colombus and the Mutelianum Group to which it belongs.

REFERENCES: Ackerman. J.D. 1995. **An Orchid Flora of Puerto Rico**. The New York Botanical Garden. U.S.A. 66-68. (as *E. mutelianum*.)



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EPIDENDRUM BRACHYANTHUM Hágsater & Dodson

Plate 712

EPIDENDRUM BRACHYANTHUM Hágsater *et* Dodson, *sp. nov.*

Type: Ecuador: Cotopaxi: West Mt. Illiniza, 3000 m, 20 October 1984, ***Alex Hirtz 2036.*** Holotype: RPSC!(Illustration voucher). Isotype: MO!

Epidendro tenuicauli F. C. Lehm. & Kraenzl. simile sed plantis et floribus minoribus, labelli lobulo medio quadrato leviter latiore quam longiore truncato recedens.

Hierba epífita, erecta, monopodial, compleja, produciendo tallos sucesivos subapicales, ca. 6-20 cm de alto. **Raíces** basales, carnosas, gruesas, blancas, 1-2 mm de grosor, ocasionalmente alguna de la base de un tallo superior. **Tallos** erectos, tipo caña, teretes, delgados, los superiores producidos de un internodo subapical del tallo anterior, el basal, 1.0-7.5 x 0.15-0.23 cm; los superiores 2-3 x 0.15-0.2 cm. **Hojas** hasta 7 en el tallo basal, distribuidas en los dos tercios apicales del mismo, 2-3 en el ápice de los superiores, alternas, subcoriáceas, caedizas; vaina ligeramente infundibuliforme, finamente estriada, verrugosa, 4-7 x 1.5-2.0 mm; lámina lanceolada, ápice subagudo, con una quilla dorsal, margen crenado, lisa, las hojas de los tallos superiores semejantes a las del tallo basal, 1.7-2.5 x 0.4-0.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueado nutante, florece una sola vez, pluriflora, 1.2 cm de largo; pedúnculo muy corto, terete, delgado, desprovisto de brácteas, 1.5-2.0 mm de largo; raquis terete, delgado, recto, 0.85-1.0 mm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 1.3-2.0 mm de largo. **Ovario** terete, delgado, liso, no inflado, 6-8 mm de largo. **Flores** 10-14, simultáneas, resupinadas, sépalos amarillos, labelo blanco con el callo naranja pálido; sin datos de fragancia. **Sépalos** entreabiertos, libres, obovados, ápice redondeado, diminutamente apiculado, 3-nervados, margen entero, 3.7-5.2 x 2.1-2.9 mm; los **laterales** ligeramente oblicuos. **Pétalos** entreabiertos, libres, cuneados, redondeados, 1-nervados, margen eroso, 3.7-4.3 x 1.3-1.5 mm. **Labelo** unido totalmente a la columna, trilobado, base profundamente cordada, margen eroso, 2.7-3 x 3.6-4.2 mm; bicalloso, los callos prominentes, globosos, formando dos tubérculos superpuestos hacia el ápice, alargados hasta la base del lóbulo medio; disco provisto una quilla lisa, subampollosa en la base, roma en el ápice; lóbulos laterales dolabriformes, suborbiculares, 1.5 x 1.8 mm; lóbulo medio cuadrado, truncado en el ápice, 1.3 x 1.9 mm. **Columna** recta, dilatada hacia el ápice, gruesa, corta, 2-3 mm de largo. **Clinandrio** corto, margen irregular. **Antera** reniforme, 4-locular, con un par de cornículos en el ápice. **Polinios** 4, lenticulares. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de1/3 del largo de la cavidad estigmática. **Nectario** penetrando un poco menos de la mitad del ovario, delgado, liso. **Cápsula** no vista.

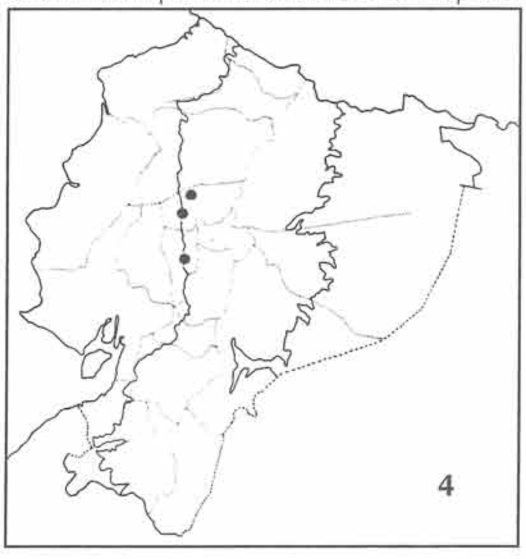
Epiphytic, erect, monopodial, complex **herb**, producing successive, subapical stems. **Roots** basal, fleshy, thick, occasionally a single root from an upper stem. **Stems** erect, cane-like, terete, thin, the upper stems produced from a subapical internode of the previous stem. **Leaves** up to 7 on the basal stem, 2-3 on the upper stems, distributed along the apical 2/3, subcoriaceous, deciduous; sheath somewhat infundibuliform, minutely striated and verrucose; blade lanceolate, apex subacute, with a dorsal keel, margin crenate, smooth. **Inflorescence** apical, racemose, short, arching-nutant, flowering only once, many-flowered, peduncle very short, terete, thin; rachis terete, thin, straight. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** terete, thin, smooth. **Flowers** 10-14, simultaneous, resupinate, sepals yellow, lip white, callus light orange. **Sepals** partly spreading, free, obovate, apex rounded, minutely apiculate, 3-veined, margin entire, the **laterals** oblique. **Petals** partly spreading, free, cuneate, rounded, 1-veined, margin erose. **Lip** united to the column, 3-lobed, deeply cordate, margin erose; bicallose, the calli prominent, globose, forming two superposed tubercles towards the apex, reaching the base of the midlobe; disc provided with a smooth keel, subampullose at the base, smooth and low at the apex; lateral lobes dolabriform-suborbicular; midlobe about equal in size, quadrate, truncate, slightly wider than long. **Column** straight, dilated towards the apex, thick, short. **Clinandrium hood** short, margin irregular. **Anther** reniform, 4-celled, with a pair of horns at the apex. **Pollinia** 4, lentil-shaped. **Rostellum** apical, slit. **Nectary** penetrating a little less than half the ovary, thin, smooth.

OTHER SPECIMENS: ECUADOR: Cotopaxi: Latacunga-Quevedo, above Pilaló, 3500 m, 26 IV 1979, *Løjtnant 13752,* AAU! **Tungurahua:** Ambato-Guaranda, III 1984, *Hirtz 1558,* AMO! QCNE!

OTHER RECORDS: ECUADOR: Tungurahua [Bolivar?]: Ambato-Guaranda, III 1984, *Hirtz 1558,* in spirit AMO!

DISTRIBUTION AND ECOLOGY: Endemic to central Ecuador, near the summit of the pacific slope of the western Andes, at around 3000-3500 m altitude. Flowering in October to April.

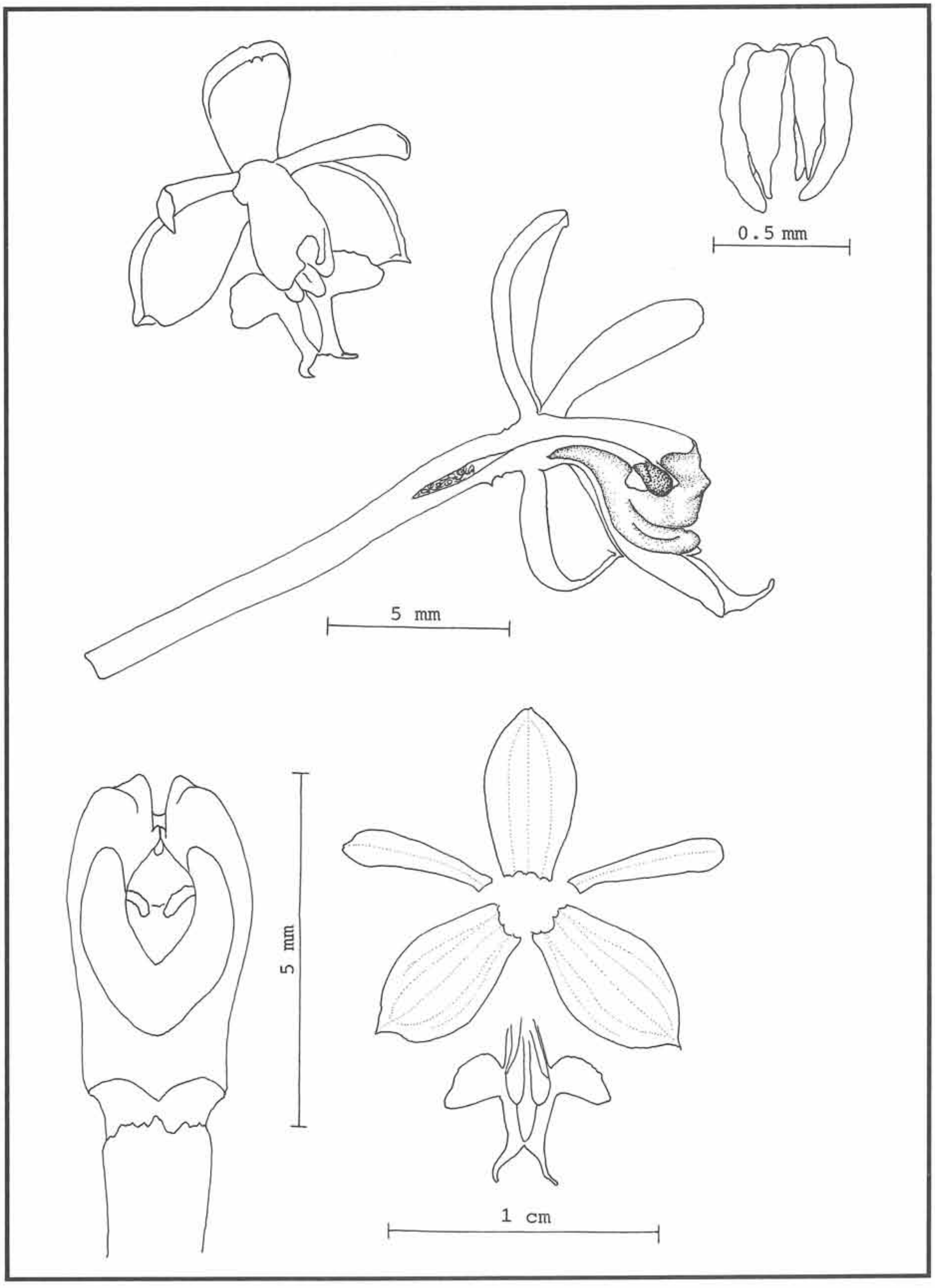
RECOGNITION: *Epidendrum brachyanthum* belongs to the Soratae Subgroup of the Scabrum Group which is characterized by the branching habit starting on a monopodial, primary stem, infundibuliform, rugose leaf-sheaths, lanceolate, aristate, acute leaves, racemose subcapitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the short plants, small leaves and flowers, the quadrate midlobe of the lip, slightly wider than long and truncate, and the cuneate, rounded petals, with the column only 2 mm long. *Epidendrum tenuicaule* has a bushy, branching, habit, short plants, the arching small inflorescence with greenish yellow, simultaneous flowers, the midlobe of the lip about twice as long as it is wide, and the column 5 mm long. *Epidendrum soratae* Rchb. f. has a reniform lip with two small lobules at the apex and 6-7 mm long sepals, the leaves are narrower, 4-8 mm wide. *Epidendrum cartilaginiflorum* Rchb. f. has a cordiform lip, apex obtuse, rounded, and the sepals are 15-16 mm long. *Epidendrum bolivianum* Schltr. has 13 mm-long sepals, non-infundibuliform sheaths, the lip quadrate-reniform in outline. *Epidendrum scopulorum* Rchb. f. has 4[7] flowers, the lip entire, cordiform, sepals 8.7-9.6 mm long, the column 6 mm long and ovate-lanceolate leaves.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek βραχυς- short, and ανθος- flower, in reference to the small size of the flowers compared to other closely related species.

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EPIDENDRUM BRACHYBLASTUM Hágsater & Dodson

Plate 713

EPIDENDRUM BRACHYBLASTUM Hágsater et Dodson, sp. nov.

Type: ECUADOR: Pastaza: Mera, 11 km, cañada del Río Anzu, 1225 m, collected 10 December 1986, flowered in cultivation 6 May 1987, ***E. Hágsater & C. H. Dodson 9093***. Holotype: AMO, spirit! Flower card and color slides, AMO! (Illustration voucher).

Epidendro bicirrhato D. E. Benn. & E. A. Christenson simile sed labelli lobulis lateralibus angustis, lobulis apicalibus cirrhosis brevibus, floribus atroviridibus, labello et columnae dimidio apicali niveo divergens.

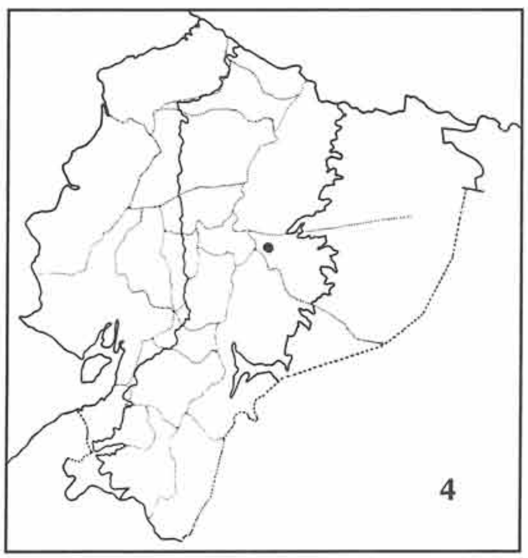
Hierba epífita, erecta, cespitosa, de unos 30 cm de alto. **Raíces** basales, carnosas. **Tallos** sencillos, tipo caña, teretes, delgados, rectos. **Hojas** varias, distribuidas a lo largo de los 2/3 apicales del tallo, suberectas, alternas, subcoriáceas; vaina tubular, finamente estriada; lámina angostamente elíptica, ápice acuminado, diminutamente apiculado, margen entero. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueada; pedúnculo corto, terete, delgado, provisto de brácteas semejantes a las florales, triangular lanceoladas, acuminadas. **Brácteas florales** triangular lanceoladas, acuminadas. **Ovario** terete, delgado, no inflado, no ornamentado, 15 mm de largo. **Flores** 3 o más, simultáneas, resupinadas, de color verde oscuro, con el labelo y la mitad apical de la columna blanco nieve, sin fragancia. **Sépalos** libres, extendidos, ligeramente cóncavos, obovados, ápice obtuso, diminutamente apiculado, margen entero, carnosos, 6.0-6.8 x 3.2-3.8 mm; el **dorsal** 3-nervado; los **laterales** 3-nervados, las nervaduras laterales bifurcadas desde la base, por lo que parecen 5-nervados. **Pétalos** libres, extendidos, angostamente espatulados, obtusos, 1-nervados, margen apical ligeramente eroso, 5-5.7 x 1-1.3 mm. **Labelo** unido a la columna, trilobado, base cordada, 4.5-4.7 x 5-6.0 mm; bicalloso, los callos delgados, cortos, disco provisto de una quilla central, roma, baja, que llega al seno apical; lóbulos laterales dolabriformes, angostos, subagudos, margen posterior eroso, 2.4 x 1.3 mm; lóbulo medio subrectangular, gradualmente más angosto hacia el ápice, margen entero, ápice bilobado, los lóbulos cirrosos, cortos, divaricados, 2-3 x 1.5-1.8 mm. **Columna** ligeramente arqueada, obcónica; 5 mm de largo. **Clinandrio** corto, entero. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de la mitad del largo de la cavidad. **Antera** obovoide, 4 locular. **Polinios** 4, tipo ala de pájaro, desiguales, el par interior más pequeño, de ¾ partes del largo de los exteriores. **Nectario** sin penetrar el ovario, más angosto en la base y ampliándose gradualmente frente a la cavidad estigmática, liso. **Cápsula** no vista.

Epiphytic, caespitose, erect **herb. Roots** basal, fleshy. **Stems** simple, cane-like, terete, thin, straight. **Leaves** several, distributed throughout the apical 2/3 of the stem, suberect, subcoriaceous; sheath tubular, minutely striated; blade narrowly elliptic, apex acuminate, minutely apiculate, margin entire. **Inflorescence** apical, racemose, short, arching; peduncle short, terete, thin, provided with basal bracts similar to the floral bracts but longer. **Floral bracts** triangular, lanceolate, acuminate. **Ovary** terete, thin. **Flowers** 3 or more, simultaneous, resupinate, deep green, the lip and apical half of the column snow white, without fragrance. **Sepals** free, spreading, slightly concave, obovate, apex obtuse, minutely apiculate, margin entire, fleshy, dorsal 3-veined, laterals 3-veined, the lateral veins bifurcate at the base and thus appearing 5-veined. **Petals** free, spreading, narrowly spathulate, obtuse, 1-veined, apical margin slightly erose. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli short; disc provided with a low, rounded keel; lateral lobes narrowly dolabriform, subacute, posterior margin erose; midlobe subrectangular, gradually narrowed towards the apex, margin entire, the apex bilobed with two short, cirrhose, divaricate lobes. **Column** slightly arched, obconical. **Clinandrium hood** short, entire. **Rostellum** subapical, slit. **Anther** obovoid, 4-celled. **Pollinia** 4, bird-wing type, unequal, the inner pair about 3/4 the size of the outer pair. **Nectary** not penetrating the ovary.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from Ecuador, middle of the amazon slopes of the Andes near Mera in central Ecuador, at 1225 m altitude. Flowering in May.

RECOGNITION: *Epidendrum brachyblastum* belongs to the Bicirrhatum Group which is characterized by the caespitose habit, simple, cane-like stems, short, arching, pluriracemose, subcapitate inflorescence, narrowly spathulate petals, 3-lobed lip, generally with cirrhate apical lobes and unequal, laterally compressed pollinia, with the inner pair smaller. The new species has deep green flowers with the lip and apical half of the column snow white, the lateral lobes of the lip are narrow and the apical cirrhose, short. It closely resembles *Epidendrum tiwinzaënse* Hágsater & Dodson which has pale green flowers, with the column and lip cream-colored, sepals 6-7 mm long, the lip with very wide, dolabriform lateral lobes. It also closely resembles *Epidendrum bicirrhatum* which has opaque, pale cream-orange flowers, the sepals and petals green at the base, the tips of the calli keels lavender, and the column white at the base, cream-yellow above. *Epidendrum hugomedinae* Hágsater & Dodson is vegetatively similar, but has very attractive, fragrant, snow-white flowers with the keels of the lip tinged violet and the obcuneate midlobe formed by two, somewhat divergent, rounded, lobes. The Bolivian *Epidendrum ophidion* Dodson & Vásquez is quite similar, but has successive, white flowers with three purple lines on the disc of the lip, pustulate sepals 6-8 mm long, and the dolabriform lateral lobes have a crenulate margin.

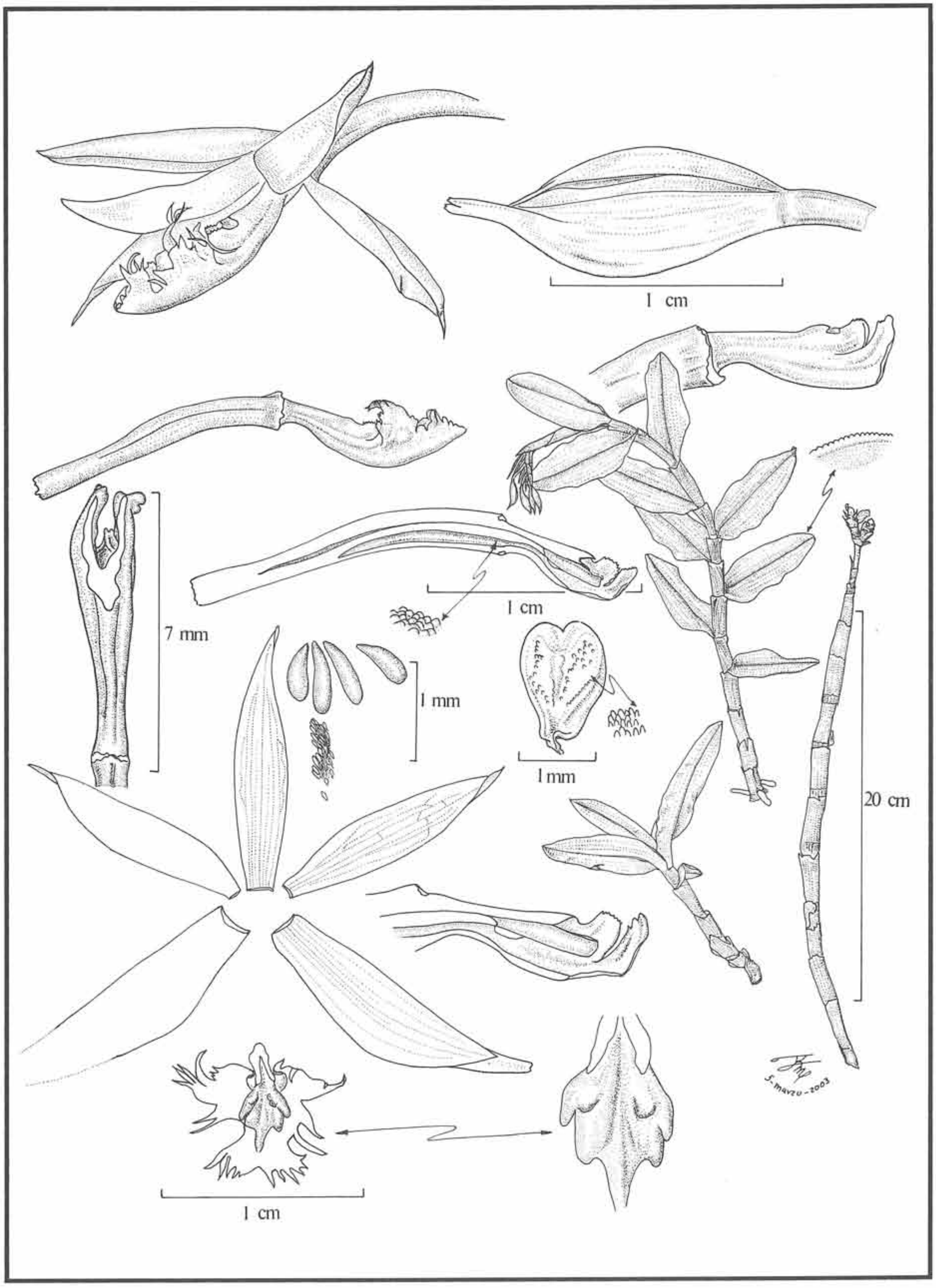


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek βραχς- short, and βλαστος- shoot, in reference to the two short apical appendages of the midlobe of the lip.

Authors: E. Hágsater & C. H. Dodson **Illustrator: E. Hágsater** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM BRACHYCORYMBOSUM Hágsater & Dodson **Plate 714**

EPIDENDRUM BRACHYCORYMBOSUM Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Zamora-Chinchipe: Road Valladolid-Río Palanda, ca. Km 6-8, ca. 1500 m, 31 January 1985, ***G. Harling & L. Andersson 21343.*** Holotype: QCA! (Illustration voucher). Isotype: GB!

Epidendro corymboso Ruiz & Pavón simile sed inflorescentiae pedunculo valde diminuto, floribus parvis simultaneis roseis, callo albo discrepans.

Hierba epífita, cespitosa, de más de 30 cm de alto. **Raíces** basales, carnosas, gruesas, escasas, 1.0- 1.3 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base y lateralmente comprimidos hacia el ápice, 22[30] x 0.4-0.7 cm. **Hojas** hasta 9, alternas, subcoriáceas, las basales ligeramente más pequeñas, distribuidas en los 2/3 apicales del tallo; vaina tubular, finamente estriada, 1.0-2.6 x 0.45-0.9 cm; lámina elíptica, ápice redondeado, con una quilla dorsal baja, margen entero a crenulado, ligeramente revoluto en ejemplares secos, 4.0-6.5[7.5] x 1.3-2.6[3.6] cm. **Brácteas espatáceas** ausentes. **Inflorescencia** apical, racemosa, erecta, 5-6 cm de largo; pedúnculo terete, ca. [3.0]4.7 x 1.15 cm, casi oculto en su totalidad por 2 brácteas tubulares, agudas, papiráceas, 3.0-3.5 x 4.0-4.5 cm; raquis oculto por las brácteas florales. **Brácteas florales** de 3/4 del largo del ovario, gradualmente más pequeñas hacia el ápice, triangulares, largamente acuminadas, 7-18 x 1.0-1.6 mm. **Ovario** terete, delgado, liso, no inflado, 14 mm de largo. **Flores** [10]30, sucesivas, resupinadas, color rosado, callo blanco; sin fragancia. **Sépalos** libres, glabros, oblongo elípticos, ligeramente acuminados, aristados, 7-nervados, margen entero, extendido, [10.4]13.4-14 x 2.6-3.6 mm; los **laterales** ligeramente oblicuos. **Pétalos** libres, angostamente elípticos, ligeramente acuminados, aristados, 3-nervados, las nervaduras muy ramificadas dando la apariencia de ser 7-nervados, margen entero, [10]12.6 x [2.5]2.6 mm. **Labelo** unido a la columna, trilobado, cordado en la base, margen profundamente laciniado, 6.5 x 8.6[9] mm; callo complejo, pentalobulado, el lóbulo apical alargado hasta la parte media del lóbulo medio; desprovisto de quillas; lóbulos laterales subrectangulares, 4.3 x 4.1 mm; lóbulo medio bilobado, los lóbulos subcuadrados, ligeramente divaricados, 3 x 5.4 mm. **Columna** recta, bordes laterales diminutamente dentados, prolongada ventralmente en el ápice en un par de lóbulos redondeados, arqueados hacia arriba, margen diminutamente dentado, 5[5.4] mm de largo. **Clinandrio** reducido, margen entero. **Antera** ovoide, 4-locular, fuertemente papilosa. **Polinios** 4, ovoides, lateralmente comprimidos, subiguales; caudícula, del doble de largo que los polinios, formada por tetradas dispuestas como tejas. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando la mitad del ovario, delgado, papiloso. **Cápsula** no vista.

Epiphytic, caespitose **herb. Roots** basal, fleshy, thin, scarce. **Stems** simple, cane-like, terete at the base and laterally compressed above. **Leaves** up to 9, alternate, subcoriaceous, the basal leaves slightly smaller, distributed throughout the apical 2/3 of the stem; sheath tubular, minutely striated; blade elliptic, apex rounded, margin entire to crenulate. **Inflorescence** apical, racemose, erect, peduncle hidden by two tubular bracts, terete, very short, rachis hidden by the floral bracts. **Floral bracts** about 3/4 the length of the ovary, gradually shorter towards the apex, triangular, long-acuminate. **Ovary** terete, thin. **Flowers** 10[30], successive, resupinate, pink colored with a white callus, without fragrance. **Sepals** free, glabrous, oblong-elliptic, slightly acuminate, aristate, 7-veined, margin entire, spreading, the **laterals** somewhat oblique. **Petals** free, narrowly elliptic, slightly acuminate, aristate, 3-veined, the veins much branched and appearing 7-veined, margin entire. **Lip** united to the column, 3-lobed, base cordate, margin deeply laciniate; callus complex, 5-lobed, the apical lobe elongate to the middle of the midlobe, without keels; lateral lobes subrectangular; midlobe bilobed, the lobes subquadrate, slightly divaricate. **Column** straight, side lobes minutely dentate, arching upwards. **Clinandrium** reduced, margin entire. **Anther** ovoid, 4-celled, strongly papillate. **Pollinia** 4, ovoid, laterally compressed, subequal, caudicles twice as long as the pollinia, formed by tetrads like a row of roof shingles. **Rostellum** subapical, slit. **Nectary** penetrating half the ovary, thin, papillose.

OTHER SPECIMENS: PERU: Cajamarca: San Ignacio: District of Tabaconas, sector Culebras, 1660 m, 18 VIII 1993, *O. Del Castillo ex Bennett 6367,* USM

OTHER RECORDS: ECUADOR: without locality, hort. Ecuagenera, 10 March 2003, *Hágsater 13931*, photograph, AMO!

DISTRIBUTION AND ECOLOGY: Known only from southern Ecuador and northern Peru, on the eastern slopes of the Andes, ranging from 1500-1660 m elevation. Flowering in January and August, probably throughout the year.

RECOGNITION: *Epidendrum brachycorymbosum* belongs to the Schistochilum Group, Elongatum Subgroup, recognized by the caespitose habit, numerous oblong leaves, usually elongate peduncle of the inflorescence, with a raceme of nonresupinate flowers, complicated callus and granular caudicles of the pollinia. The species is immediately recognized by the short peduncle. At first sight, because the peduncle has bracts, the appearance of the plant seems to indicate a member of the Alpicolum Group, but the flowers immediately indicate otherwise. The flowers are typically a member of the Elongatum Subgroup, with the complicated callus, fringed lip and caudicles of the pollinia formed by long pollen tetrads reminiscent of a stack of roof shingles. Other species in this group all have a long peduncle, which characterizes the group.



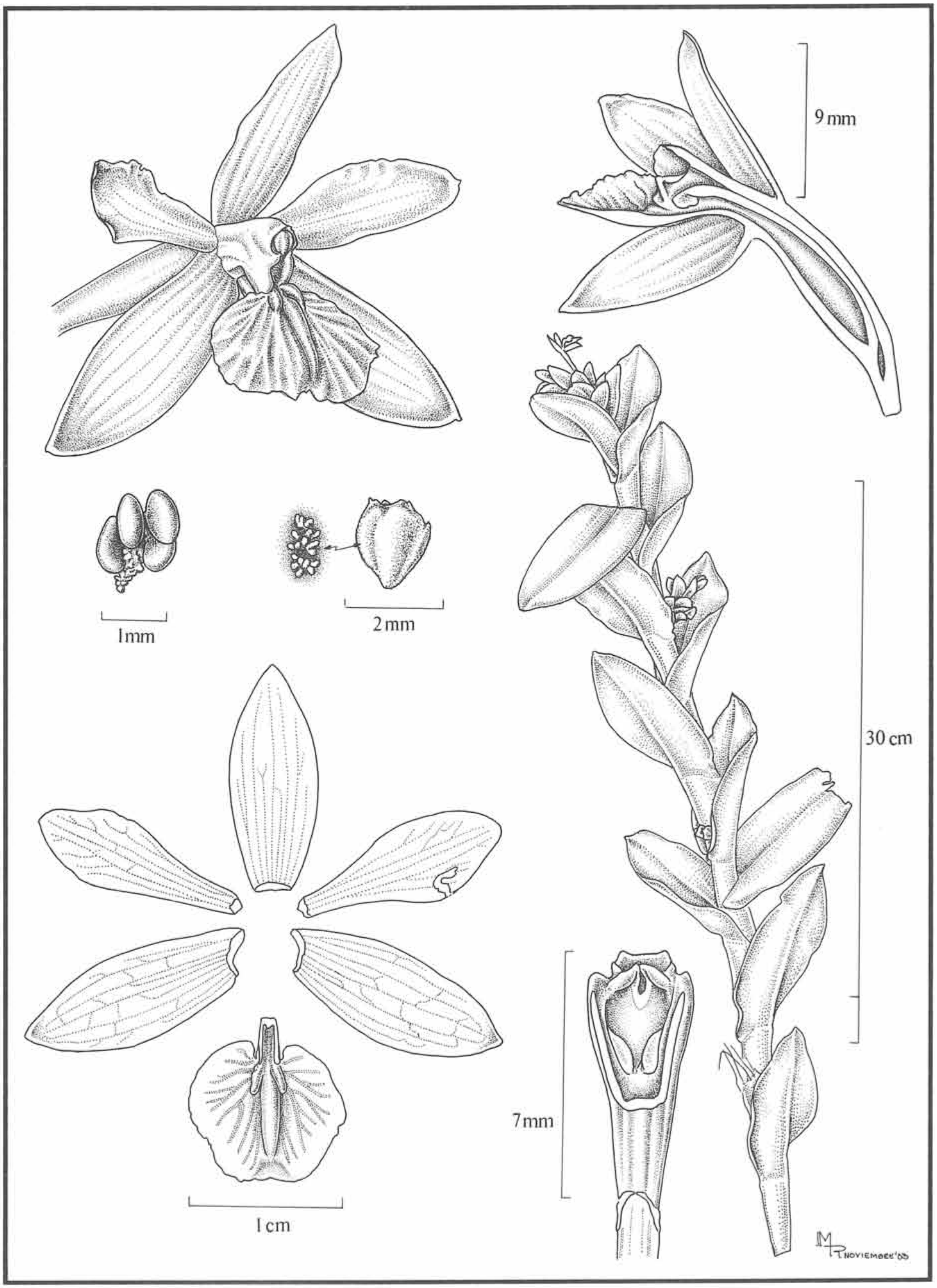
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek βραχυς- short, and χορυμβός- a cluster of flowers, in reference to the shape of the inflorescence, and the first available description of a species of this group from Peru.

REFERENCE: Bennett, D. E. & E. A. Christenson, **Icones Orch. Peruv.** 3: 241. The authors used the earliest available name from Peru, but did not consider the characteristic short peduncle of the inflorescence which distinguishes this species from the type of *E. corymbosum* Ruiz & Pavón located in Madrid.

Authors: E. Hágsater & C. H. Dodson **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO **ICONES ORCHIDACEARUM 7. 2004. Plate 714**



EPIDENDRUM BRACHYPODUM Hágsater

Plate 715

EPIDENDRUM BRACHYPODUM Hágsater, *sp. nov.*

Type: COLOMBIA: Chocó: San José del Palmar: Vereda Las Amarillas, Carretera Boquerón-Río Blanco, 2300 m, 2 April 1996, ***Néstor Paz, F. Castro, A. Fajardo & P. Grant 536***. Holotype: CUVC! (Illustration voucher).

Epidendro phyllocharis Rchb.f. simile sed inflorescentia apicali, pedunculo brevi, sepalis petalisque duplo latioribus, petalis spathulato-obtrullatis, nervis lateralibus e basi ramosis recedens.

Hierba terrestre, cespitosa, erecta, 70 cm de alto. **Raíces** no vistas. **Tallos** sencillos, tipo caña, lateralmente aplanados, ancipitosos, anchos, rectos, hasta 70 x 1.55 cm. **Hojas** numerosas, distribuidas a todo lo largo del tallo, alternas; vaina tubular, ancipitosa, bialada, algo infundibuliforme y estriada en seco, 2.0-3.5 x 1.0-1.55 cm; lámina articulada, elíptica, ápice redondeado, margen entero, 5.3-9.0 x 3.2-4.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical y lateral, racemosa, suberecta, produce varios racimos sucesivos con el tiempo, hasta 5.5 cm de largo; pedúnculo corto, cubierto por brácteas tubulares en la base y conduplicadas hacia el ápice, imbricadas, ancipitosas, subagudas, estriadas, 1-2 cm de largo. **Brácteas florales** más cortas que el ovario, conduplicadas, subagudas, imbricadas, 10 mm de largo. **Ovario** terete, liso, la superficie ventral inflada en las ¾ partes apicales, 13.5 mm de largo. **Flores** sucesivas, se desarrolla una a la vez, resupinadas, de color morado claro, sin datos de fragancia. **Sépalos** entreabiertos, libres, elípticos, subagudos, 6-nervados, algunas nervaduras ramificadas en la base, dando la apariencia de ser 7-8 nervados, margen entero, extendido, 14-15.4 x 5.8-6.1 mm. **Pétalos** entreabiertos, libres, espatulado obtrulados, redondeados, 3-nervados, las nervaduras laterales ramificadas casi desde la base, margen entero, 14 x 5.4 mm. **Labelo** unido a la columna, entero, en aspecto general subrómbico orbicular, base cordada, truncado en el ápice, margen crenado, 9 x 10.3 mm; bicalloso, los callos delgados, cortos; disco provisto de una quilla, prominente, lisa, subaguda, que se desvanece antes de llegar al ápice del labelo. **Columna** recta, obcónica en el ápice, 7 mm de largo. **Clinandrio** prominente, pero sin sobrepasar el cuerpo de la columna, margen entero. **Antera** ovoidea, 4-locular. **Polinios** 4, obovoides; caudículas suaves y granulosas, ligeramente más largas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, ocupando casi todo lo largo de la cavidad estigmática. **Nectario** penetrando ¾ partes del ovario, inflado hacia la mitad, liso. **Cápsula** no vista.

Terrestrial, caespitose, erect **herb. Stems** simple, cane-like, laterally compressed, ancipitose, wide, straight. **Leaves** numerous, distributed throughout the stem, alternate; sheath tubular, ancipitose, two-winged, somewhat infundibuliform and striated when dry; blade articulate, elliptic, apex rounded, margin entire. **Inflorescence** apical and lateral, racemose, suberect, producing successive racemes with time; peduncle short, covered by bracts which are tubular at the base, conduplicate above, imbricating, ancipitose, subacute, striated. **Floral bracts** much shorter than the ovary, conduplicate, subacute, imbricating. **Ovary** terete, smooth, ventrally inflated along ¾ of its length. **Flowers** successive, developing one at a time, resupinate, light purple. **Sepals** partly spreading, free, elliptic, subacute, 6-veined, some branching from the base so as to appear 7-8-veined, margin entire, spreading. **Petals** partly spreading, spathulate-obtrullate, rounded, 3-veined, the lateral veins branching from the base, margin entire. **Lip** united to the column, entire, orbicular-subrhombic, base cordate, apex truncate, margin crenate; bicallose, the calli thin, short, disc provided with a low, rounded keel which disappears before the apex of the lip. **Column** straight, dilated apically. **Clinandrium hood** prominent, without surpassing the body of the column, margin entire. **Anther** ovoid, 4-celled. **Pollinia** 4, obovoid, caudicles soft and granulose. **Nectary** penetrating ¾ of the ovary, inflated towards the middle, smooth.

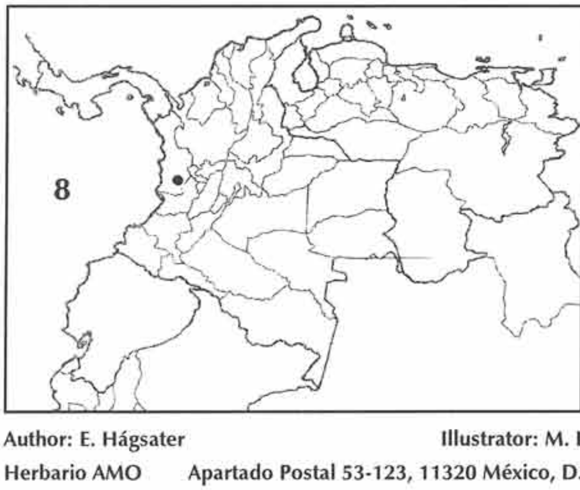
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the western slope of the Cordillera Occidental in central Colombia, at 2300 m altitude, terrestrial in wet cloud forest. Flowering in April, probably throughout the year.

RECOGNITION: *Epidendrum brachypodum* belongs to the Alberti Group and Subgroup which is characterized by the caespitose habit, with numerous, green or purple-colored leaves, the laterally flattened stems with apical and lateral inflorescences, the apical one with an ancipitose peduncle terminating in a conduplicate spathaceous bract somewhat larger but similar to the floral bracts, and one to several racemes of imbricating, conduplicate, rounded, bracts which produce one flower at a time. The species is recognized by the short apical peduncle of the inflorescence, relatively wide floral segments, elliptic sepals, wide, spathulate-obtrullate petals, with the lateral veins branching from the base and the entire, orbicular-subrhombic, cordate, truncate lip. It closely resembles *Epidendrum phyllocharis* Rchb. f. which has a prominent peduncle on the apical inflorescence, narrower (ca. 3 mm), spreading, linear-elliptic sepals, the three veins of the petals simple, a cordiform, trullate-truncate, more or less hexagonal lip, the flowers white tinged with pinkish bronze. *Epidendrum hexagonum* Hágsater & Dodson has the same general characters, but the plants and flowers are green and larger. *Epidendrum ingramii* Hágsater & García-Cruz has acuminate floral bracts, and an acuminate lip, the flowers greenish tinged with purple.

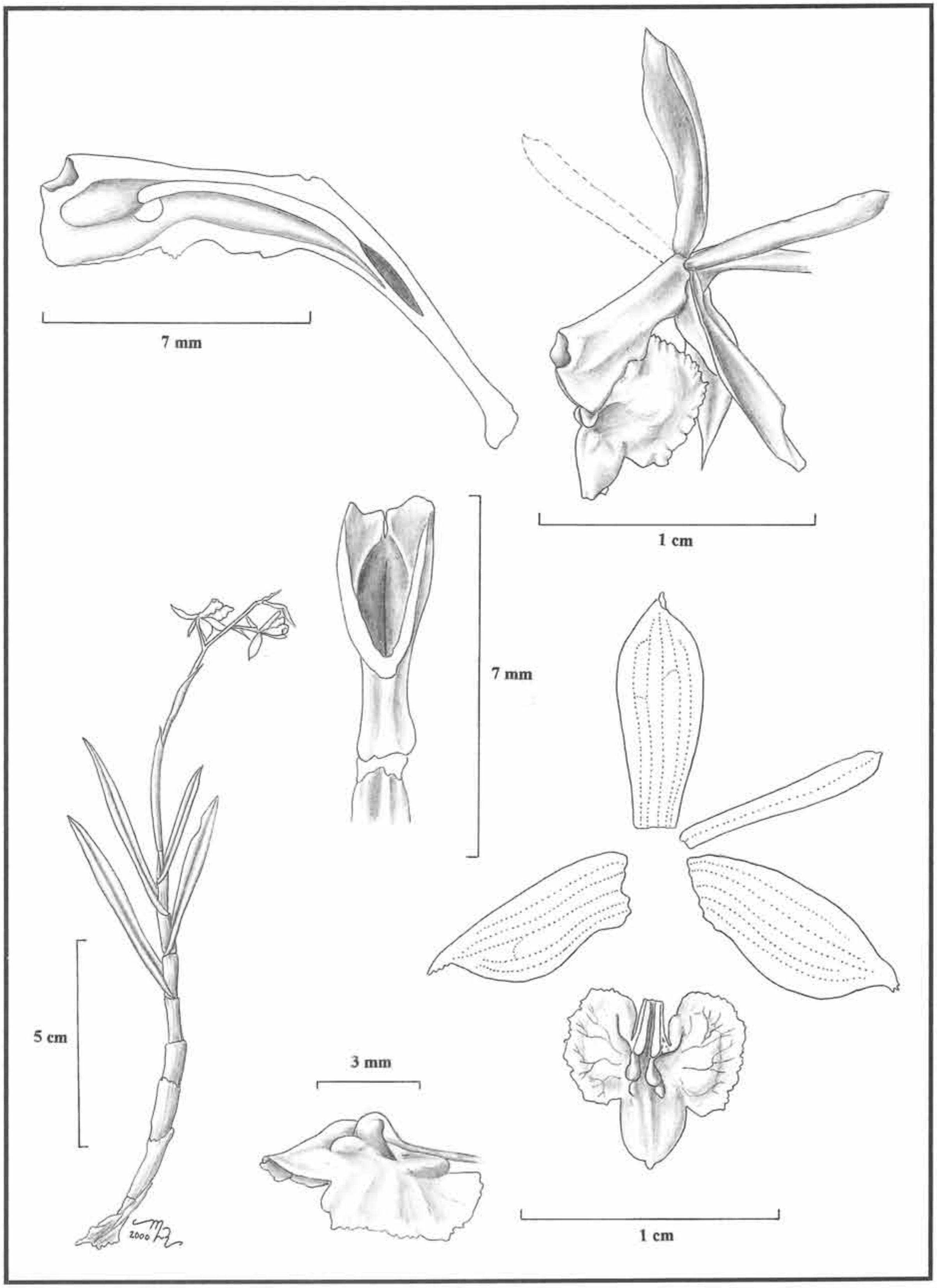
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek βραχυς- short, and ποδιον- foot, in reference to the short pedunculate inflorescence, when compared to the closely related *E. ellipsophyllum* and *E. phyllocharis*, which have a comparatively longer peduncle.



Author: E. Hágsater **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM CAMPII Hágsater & Dodson

Plate 716

EPIDENDRUM CAMPII Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Azuay: eastern Cordillera, 4-6 km north of the village of Sevilla de Oro, 2700-3000 m, 14 August 1945, ***W. H. Camp E-4689B.*** Holotype: S! (Illustration voucher). Isotypes AMES x2! NY!

Epidendro rhodoide Hágsater & Dodson simile sed petalis 1-nervatis triplo sepalis angustioribus, labelli lobulo medio hemielliptico differens.

Hierba epífita, rastrera, erecta, de 16-43 cm de alto. **Raíces** basales, carnosas, 0.7-1.9 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente aplanados, 9-15 x 0.21-0.43 cm, los tallos nuevos se forman a unos 5 cm de la base del tallo anterior. **Hojas** 4-6, distribuidas a lo largo del tallo, articuladas, alternas; vainas tubulares, lateralmente aplanadas, ancipitosas, finamente estriadas y rugosas, 0.8-2.7 x 0.21-0.43 cm; lámina angostamente elíptica, aguda, apiculada, margen eroso hacia el ápice y ligeramente revoluto cuando secas, 3-8.8 x 0.3-0.72 cm. **Brácteas espatáceas** 2-3, tubulares, ancipitosas, de lados paralelos, agudas, 1.6-5.1 x 0.18-0.29 cm. **Inflorescencia** apical, florece una sola vez, racemosa, arqueada, laxa, 8-17 cm de largo; pedúnculo arqueado, cubierto totalmente por las espatas, 6-10.5 cm de largo. **Brácteas florales** tan largas como el ovario, triangulares, acuminadas, 4-10 mm de largo. **Ovario** terete, 5-6 mm de largo. **Flores** ca. 13, simultáneas, resupinadas, amarillo verdoso teñidas de púrpura intenso, fragancia no registrada. **Sépalos** libres, extendidos, carinados dorsalmente, la carina erosa, 5-nervados, margen entero; el **dorsal** obovado, agudo, 9.1 x 3.2 mm; los **laterales** elípticos, oblicuos, con una quilla dorsal erosa, 8.9-9.5 x 3.2-3.8 mm. **Pétalos** extendidos, libres, oblongos, ligeramente ensanchados hacia el ápice, obtusos, 1-nervados, margen entero,8.3 x 1.2 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, 7.1 x 7.1 mm; bicalloso, callos subglobosos que se continúan con un par de estructuras cortas y redondeadas hacia la base del lóbulo medio; disco desprovisto de quillas, con una vena engrosada que se desvanece hacia el ápice; lóbulos laterales transversalmente elípticos, margen eroso, 2.4 x 4.4 mm; lóbulo medio hemielíptico, redondeado, apiculado, margen entero, de alrededor de la mitad de tamaño de los laterales, 2.6 x 2.6 mm. **Columna** recta, formando un arco ligero con el ovario, 7 mm de largo. **Clinandrio** reducido, entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de ¼ de largo de la cavidad estigmática. **Nectario** penetrando 1/3 parte del ovario, engrosado en la columna, adelgazándose en el ovario, no ornamentado. **Cápsula** elipsoide, 24 x 9 mm; pedicelo 3 x 0.5 mm; cuello apical corto ca. 1 mm de largo.

Epiphytic, repent **herb. Roots** fleshy, thick. **Stems** cane-like, simple, ancipitose, arising from an intermediate internode of the previous stem. **Leaves** 4-6, distributed along of the stem, sheaths ancipitose, finely striated and rugose; blade narrowly elliptic, acute, apiculate, margin erose at the apex and somewhat revolute when dry. **Spathaceous bracts** 2-3, tubular, ancipitose, parallel-sided, racemose, arching, lax-flowered. **Inflorescence** apical, racemose, arquate. **Floral bracts** as long as the ovary, triangular acuminate. **Ovary** terete. **Flowers** simultaneous, resupinate, greenish-yellow deep purplish-tinged. **Sepals** 5-veined, **dorsal** obovate, acute, **laterals** elliptic, oblique, dorsally keeled, keel erose. **Petals** oblong, somewhat widened towards the apex, obtuse, 1-veined. **Lip** 3-lobed, deeply cordate, bicallose, the calli continued into to smaller rounded knobs, mid-vein thickened; lateral lobes about twice the size of the midlobe, transversely elliptic, margin erose, midlobe hemi-elliptic, apiculate, margin entire. **Column** straight, forming an arch with the ovary. **Clinandrium hood** reduced, entire. **Nectary** penetrating 1/3 of the ovary, thickening within the column, narrowed progressively into the ovary. **Capsule** ellipsoid, with a short apical neck.

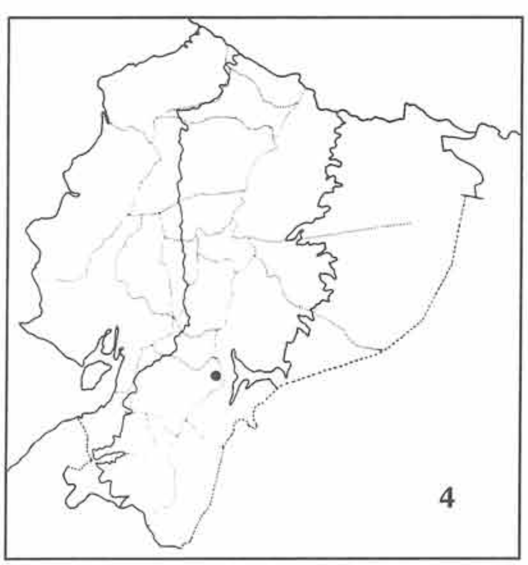
OTHER SPECIMENS: ECUADOR: Azuay: same locality as the type, *Camp E-4689A*, AMES! NY! S!

DISTRIBUTION AND ECOLOGY: Known only from the type locality, east of Cuenca, at about 2700-3000 m altitude. Flowering in August.

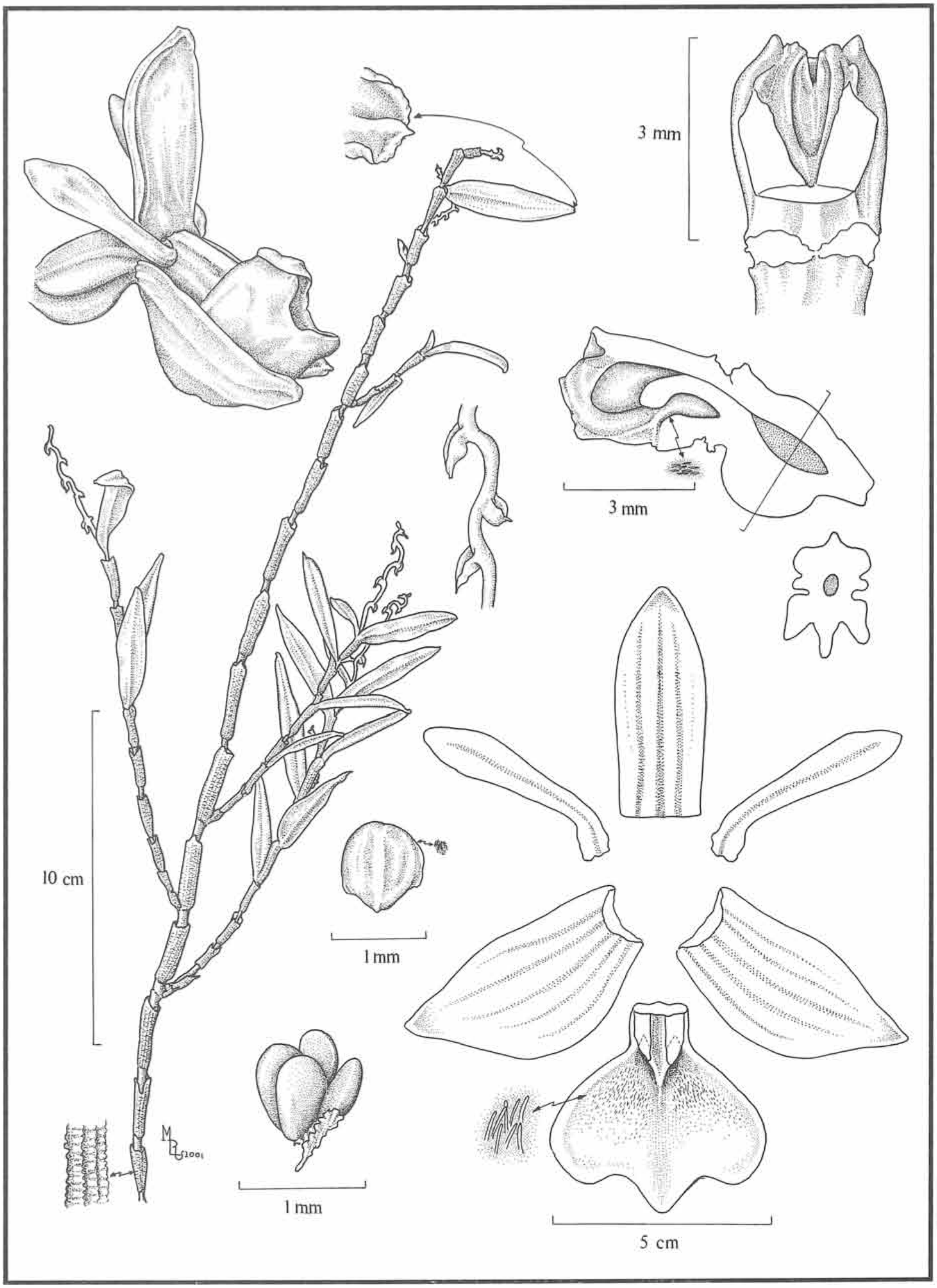
RECOGNITION: *Epidendrum campii* belongs to the Pergracile Subgroup of the Alpicolum Group, which is characterized by the subcaespitose habit, long spathaceous bract with parallel sides, lax-flowered, racemose inflorescence, membranaceous flowers, 3-lobed lip which is not fleshy-thickened. The species is recognized by the hemi-elliptic midlobe of the lip, about as wide as it is long, and the petals are 1-veined, about 1/3 the width of the dorsal sepal. *Epidendrum rhodoides* has a subquadrate midlobe of the lip, the 5-veined petals are as wide as the dorsal sepal. *Epidendrum vidal-senegei* Hágsater & Dodson, has larger flowers, the sepals 13-16 mm long, and the 1-veined petals are linear, less than half as wide as the sepals, the leaves somewhat wider, 0.7-0.9 cm, and the midlobe of the lip rectangular, 3-4 times longer than wide.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In Honor of W. H. Camp, who collected the type. He collected plants in Ecuador between 1943 and 1947. His orchid material is widely deposited at AMES, MO, NY, QCA, QCNE, S and SEL.



Authors: E. Hágsater & C. H. Dodson **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM CAMPYLORHACHIS Hágsater & Dodson

Plate 717

EPIDENDRUM CAMPYLORHACHIS Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Morona-Santiago: Gualaquiza, Cordillera del Cóndor, ridge top above Banderas, near disputed Ecuador-Peru border, 03°28´S 78°15´W, 1350 m, 17 July 1993, ***Al Gentry 80002.*** Holotype MO! (Illustration voucher). Isotype: QCNE!

Epidendro lindae Hágsater & Dodson simile sed foliis minoribus, inflorescentia racemosa, labello ad basem cuneato, lobulis lateralibus oblique obovatis, petalis anguste oblanceolatis, ovario profunde triquetro differt.

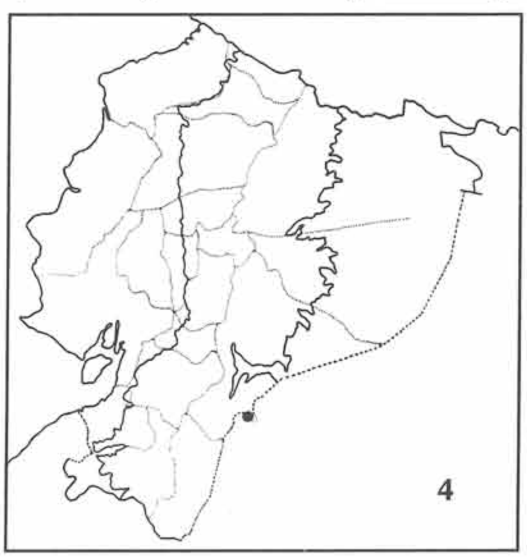
Hierba terrestre, ramificada, de más de 35 cm de alto. **Raíces** no vistas. **Tallos** erectos, ramificados cuando maduros, tipo caña, teretes, el principal de más de 30 x 0.2-0.35 cm, las ramas más cortas, 4-17 x 0.12-0.22 cm. **Hojas** en el tallo principal caedizas, 5-10 en las ramas, distribuidas a todo lo largo de los mismos; alternas, coriáceas; vaina tubular a algo infundibuliforme en seco, estriada, rugosa, 0.8-2.8 x 0.12-0.35 cm; lámina angostamente elíptica, ápice bilobado y mucronado, con una quilla dorsal baja, margen entero y ligeramente revoluto en seco, 2.1-4.4 x 0.4-1.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, dística, erecta, 2.6-3.8 cm de largo; pedúnculo terete, delgado, desprovisto de brácteas, 5-11 mm de largo; raquis terete, marcadamente flexuoso, cada segmento incurvado debajo de la bráctea, de manera que las brácteas quedan retrorsas, 2.5-3.3 mm de largo. **Brácteas florales** tan largas como el ovario, gradualmente más cortas hacia el ápice, anchamente triangulares, agudas, con una quilla dorsal baja, margen entero, retrorsas, abrazadoras, 2.2-4 mm de largo. **Flores** 5-6, el labelo siempre hacia el raquis, aparentemente sucesivas, color amarillo verdoso, sin datos de fragancia. **Ovario** oblicuamente triquetro, de sección complicada, aparece de 8 quillas desiguales y 8 acanalado, las 3 quillas ventrales prominentes; no inflado, liso, 3.5 mm de largo. **Sépalos** libres, carnosos, margen entero, 5.2-5.5 x 2-2.7 mm; **dorsal** extendido, oblongo subobovado, 3-nervado, subagudo; los **laterales** entrecerrados, paralelos con respecto a la columna, elípticos, agudos, 5-nervados, ligeramente oblicuos. **Pétalos** libres, semiretrorsos, angostamente oblanceolados, oblicuos, redondeados, 1-nervados, carnosos, margen entero, 5.0 x 1.0 mm. **Labelo** unido a la columna, abrazando el ápice de la columna y cubriéndolo totalmente, trilobado, base cuneada, carnoso, margen entero; el callo muy corto y bajo, en forma de "V", desprovisto de quillas, superficie pubescente hacia la base; lóbulos laterales obovoides, oblicuos, redondeados, 2 x 3 mm; lóbulo medio anchamente triangular, muy corto, redondeado, 1 x 1.7 mm. **Columna** recta, gruesa, ventralmente provista de un diente redondeado en el ápice, 3 mm de largo. **Clinandrio** reducido, entero. **Antera** subesférica, la superficie ornamentada con papilas diminutas. **Polinios** 4, obovoides, desiguales; caudículas suaves y granulosas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** sin penetrar el perianto, escasamente pubescente. **Cápsula** no vista.

Terrestrial, branching **herb. Stems** erect, branching, cane-like, terete. **Leaves** distributed throughout the stems, coriaceous; sheath tubular to somewhat infundibuliform when dry, striated, rugose; blade narrowly elliptic, apex bilobed and mucronate, margin entire and revolute when dry. **Inflorescence** apical, racemose, distichous, erect, peduncle terete, short, rachis terete, markedly flexuous, each segment incurved below the bract, so that the bract appears retrorse. **Floral bracts** as long as the ovary, triangular, acute. **Flowers** 5-6, apparently successive, the lip always facing the rachis, greenish-yellow. **Ovary** obliquely triquetrous, in section formed by 8 unequal ribs and 8-sulcate, the 3 lower ribs prominent; not inflated. **Sepals** free, fleshy, margins entire; **dorsal** sepal spreading, oblong, subacute, 3-veined, **laterals** barely open, parallel to the column, elliptic, acute, 5-veined, somewhat oblique. **Petals** free, semiretrorse, narrowly oblanceolate, oblique, rounded, 1-veined, fleshy, margin entire. **Lip** united to the column, embracing the apex of the column and completely covering it, 3-lobed, base cuneate, fleshy, margin entire, callus short and low, "V" shaped, surface pubescent towards the base; lateral lobes obliquely obovoid, rounded, apical lobe widely triangular, short, rounded. **Column** straight, thick, with a basal tooth at each side of the apex. **Clinandrium hood** reduced, entire. **Anther** subspheric. **Pollinia** 4, obovoid, unequal, caudicles smooth and granular. **Rostellum** apical slit. **Nectary** not penetrating the ovary, scarcely pubescent.

OTHER SPECIMENS: ECUADOR: Morona-Santiago: Cordillera del Condor, Centro Shuar Warints, Cerro Chikichik Naint, 1220 m, 9 X 2002, *Kajekai 28*, QCNE!

DISTRIBUTION AND ECOLOGY: Known only from the Ecuadorean-Peruvian border on the Cordillera del Condor in the Amazon basin, terrestrial and epiphytic in primary forest, from 1220 to 1350 m altitude. Flowering in July to October.

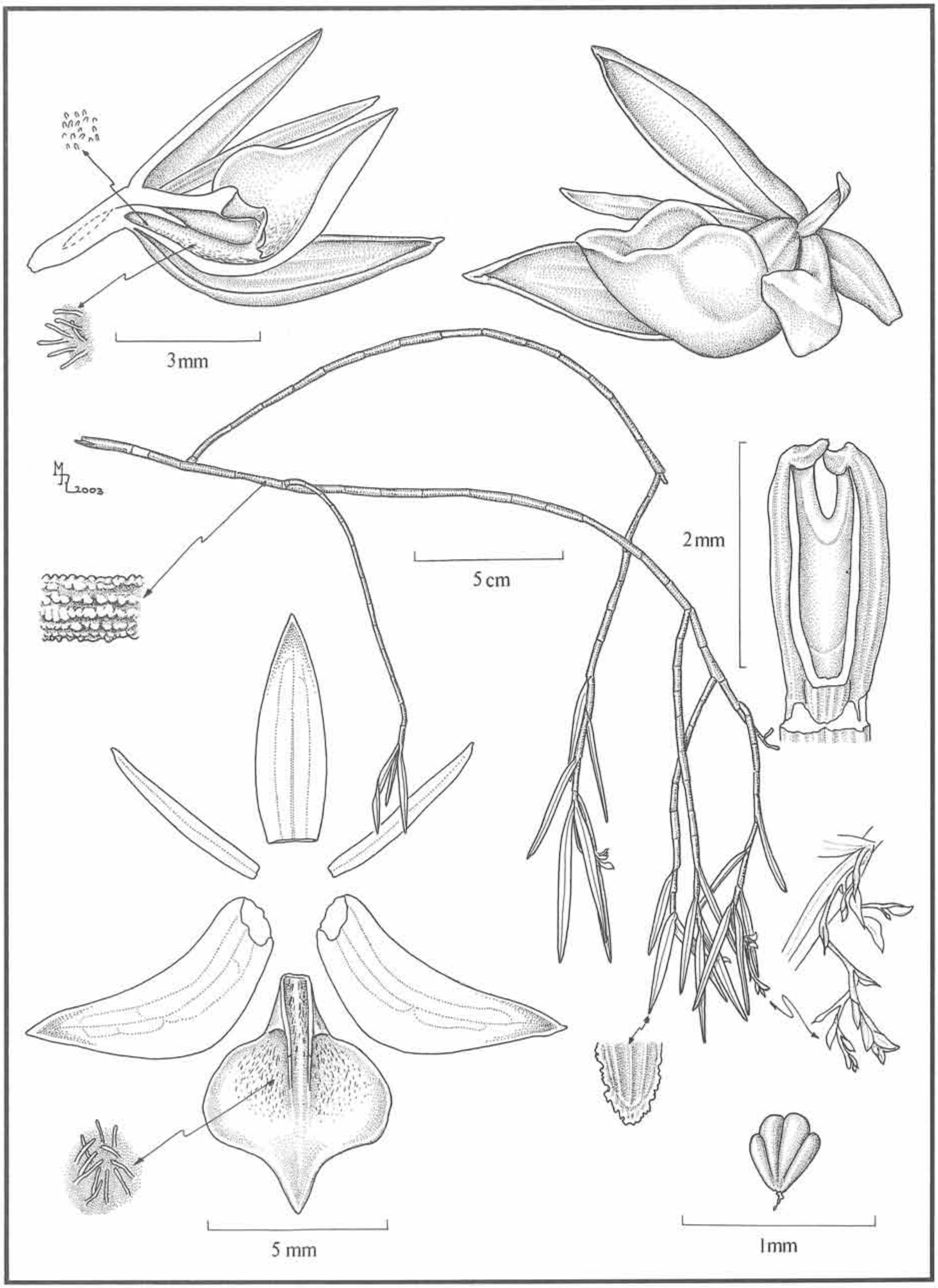
RECOGNITION: *Epidendrum campylorhachis* belongs to the Aquaticum Subgroup of the Macrostachyum Group, which has branching stems, distichous inflorescences, small, fleshy flowers and pubescent nectaries. The new species has a three-lobed lip with the base cuneate, narrowly oblanceolate petals and an oblique, deeply triquetrous ovary, with the rachis segments prominently incurved below each bract. It closely resembles *Epidendrum lindae* which has larger, wider leaves, the rachis flexuous so that the bracts are somewhat retrose, linear petals and a terete ovary, the lip is slightly cuneate with the lateral lobes subquadrate. *Epidendrum carnosiflorum* C. Schweinf. has larger flowers (dorsal sepals 10-11 mm long), and a three-lobed lip, the midlobe much larger than the lateral lobes. *Epidendrum rugulosum* Schltr. has larger, linear-oblong leaves and larger flowers, with the lip suborbicular and sepals 11 mm long. *Epidendrum stenocalymmum* Hágsater & G. Calatayud has small, ovate, leaves, a simple, erect raceme, entire, oblanceolate, unguiculate petals and the cuneate lip forming a deep sac in front of the column, so that the column is not visible.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek καμπυλος- incurved, and ραχις- rachis, in reference to the peculiar incurved segments of the rachis, which cause the bracts to appear retrose.

Authors: E. Hágsater & E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM CAMPYLOSTELE Hágsater & R. Vásquez

Plate 718

EPIDENDRUM CAMPYLOSTELE Hágsater *et* R. Vásquez, *sp. nov.*

Type: BOLIVIA: Cochabamba, Chaparé, km 95 entre Cochabamba y Villa Tunari, 17°10´S 65° 47´W, epífita colgante en Bosque Montano húmedo, 1750 m, 17 January 1984, ***R. Vásquez, C. & J. Luer 825.*** Holotype: Herbarium vasquezianum! xerox at AMO! Isotype: LPB.

Epidendro ellianthoide Schltr. simile sed floribus majoribus, alabastris prominentiam ventralem calciformem formantibus, columna incurvata et sepalis lateralibus valde falcatis discrepans.

Hierba epífita, arqueado colgante, ramificada, de más de 30 cm de alto. **Raíces** no vistas. **Tallos** teretes, ramificados, delgados, el principal de más de 30 x 0.2 cm, las ramificaciones producidas de la región media apical del tallo principal, más cortas, 5-19.5 x 0.1-0.15 cm. **Hojas** del tallo principal no vistas; 4-6 en las ramas, distribuidas hacia la mitad apical de los tallos, vaina tubular, estriada y verrugosa, hasta 24 mm de largo; lámina linear lanceolada, ápice agudo, margen crenado, ligeramente revoluto hacia la mitad basal, 2.3-6.3 x 0.3-0.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, paniculada, formada por uno o varios racimos, dística, arqueado nutante, 2-4 cm de largo; pedúnculo, filiforme en la base, lateralmente aplanado hacia el ápice, desprovisto de brácteas, 7 mm de largo; raquis ligeramente flexuoso. **Brácteas florales** tan largas como el ovario, triangulares, acuminadas, 3-4 mm de largo. **Flores** 2-4, por racimo, sucesivas, 2 abiertas a la vez, dísticas, blanco verdosas a verde amarillentas; sin datos de fragancia. **Ovario** corto, terete, delgado, no inflado, liso, 2-3 mm de largo. **Botón floral** en forma de pié, formando una prominencia ventral en forma de talón. **Sépalos** entreabiertos, libres, agudos, 3-nervados, margen entero, el **dorsal** angostamente ovado, 6 x 2 mm, los **laterales** paralelos con respecto a la columna, elípticos, oblicuos, falcados, 6.6-6.9 x 1.9-2.5 mm. **Pétalos** entreabiertos, libres, lineares, subagudos, más o menos falcados, 1-nervados, margen entero, 5.2 x 0.4 mm. **Labelo** unido a la columna, entero, transversalmente elíptico, prominentemente apiculado, abrazando el ápice de la columna en posición natural, 5.3 x 5.7 mm; fuertemente pubescente en la base, callo formado por dos quillas laminares bajas. **Columna** más o menos incurvada (arqueada hacia arriba) geniculada en la base con respecto al ovario, 2.8-3.8 mm de largo. **Clinandrio** reducido, entero. **Antera** no vista. **Polinios** 4, obovoides, el par interior ligeramente más grueso dorsalmente que el par exterior, los cuatro formando una cuña. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos, la cavidad estigmática ocupando más de la mitad ventral de la columna. **Nectario** corto, sin traspasar el perianto, papiloso ventralmente. **Cápsula** no vista.

Epiphytic, arching-nutant, branching **herb. Stems** terete, branching, thin, the branches produced from the upper middle region of the main stem, and shorter. **Leaves** of the branches 4-6, distributed throughout the upper half of the branches; sheath tubular, striated and verrucose; blade linear-lanceolate, apex acute, margin crenate, somewhat revolute below. **Inflorescence** apical, paniculate, formed by one or several racemes, distichous, arching-nutant; peduncle filiform at the base, laterally flattened towards the apex; rachis somewhat flexuous. **Floral bracts** as long as the ovary, triangular, acuminate. **Flowers** 2-4 per raceme, successive, 2 open at one time, greenish white to yellow-green. **Ovary** short, terete, thin, smooth. **Sepals** partly spreading, free, acute, 3-veined, margin entire, **dorsal** narrowly ovate, **laterals** parallel to the column, elliptic, oblique, falcate. **Petals** partly spreading, free, linear, subacute, more or less falcate, 1-veined, margin entire. **Lip** united to the column, entire, transversely elliptic, prominently apiculate, embracing the column in natural position, very pubescent at the base, callus formed by two laminar, elongate, keels. **Column hood** more or less incurved (arched upwards), geniculate at the base with respect to the ovary. **Clinandrium hood** reduced, entire. **Pollinia** 4, obovoid, the inner pair thicker than the outer pair, all four forming a wedge. **Lateral lobes of the stigm** not seen, but the stigmatic cavity occupying more than half the ventral surface. **Nectary** short, without penetrating the ovary, ventrally papillose.

OTHER SPECIMENS: BOLIVIA: Cochabamba: Chaparé: between Cochabamba and Villa Tunari, near km 100, 1850 m, 17 I 1984, *Luer 9367*, SEL! (Illustration voucher). [Note, this specimen was collected together with the type by the same collectors on the same date.]

DISTRIBUTION AND ECOLOGY: Known only from Bolivia, from the type locality in Cochabamba, epiphytic in cloud forest between 1750 and 1850 m altitude. Flowering in January and later.

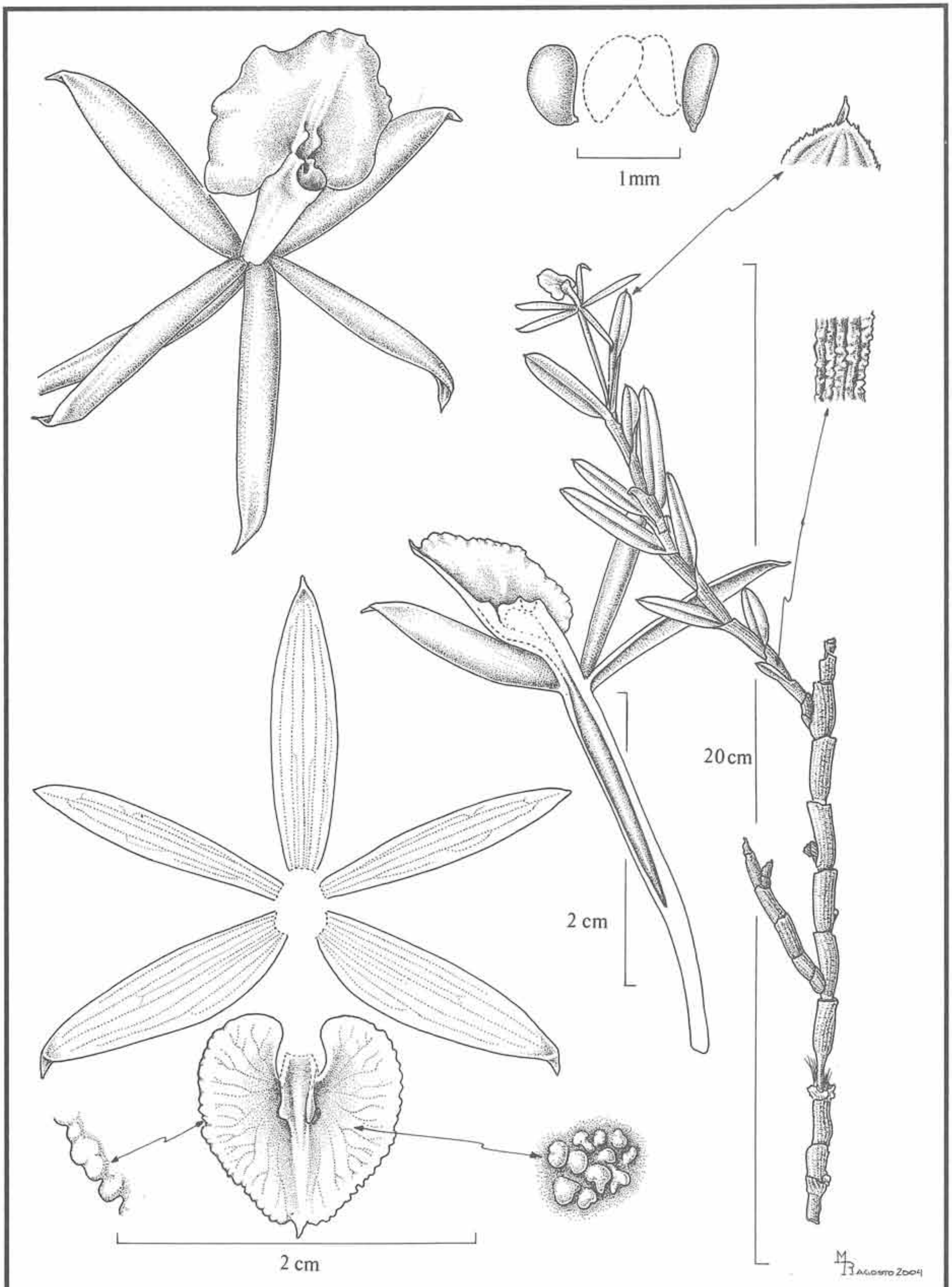
RECOGNITION: *Epidendrum campylostele* belongs to the Elleanthoides Group, Guacamayense Subgroup, characterized by the thin, branching stems, long, linear, grassy leaves, filiform peduncle and rachis of the inflorescence. The new species is recognized by the relatively intermediate flowers (for the group: sepals 6-6.9 mm long), the incurved column (arched upwards), and the falcate lateral sepals. *Epidendrum elleanthoides* has smaller flowers, the sepals 3.7-4.4 mm long, lip transversely ovate, and bicarinate callus. *Epidendrum guacamayense* Hágsater & Dodson, has the inflorescence 3.5-13 cm long, rachis zig-zag, sepals 7.0-7.5 mm long, the ecallose lip completely embracing and covering the column. *Epidendrum montispichinchense* Hágsater & Dodson has a short, thick, straight column, forming a wide cavity with the lip, sepals are 6.4-6.8 mm long, the apical margin of the leaves is entire. *Epidendrum elleanthodiceras* Hágsater & E. Santiago has larger flowers (sepals 10 mm long), acute teeth at the apex of the long, thin, arched, column, unlike any other species of the group, and a triangular lip. *Epidendrum hesperium* Hágsater & E. Santiago has a generally simple, racemose inflorescence with up to 15 flowers, shorter sepals and does not form a foot-like bud with a prominent heel.

CONSERVATION STATUS: DD. Data deficient. The species is of no horticultural interest and therefore rarely collected.

ETYMOLOGY: From the Greek καμπυλος- incurved, and στηλη- column, in reference to the incurved column characteristic and unique to this species.



5



EPIDENDRUM CARDIOBATESII Hágsater & Dodson **Plate 719**

EPIDENDRUM CARDIOBATESII Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Zamora-Chinchipe: Nambija, 1800 m, hort. Ecuagenera 8 March 2003. Collected by ***Hugo Medina Troyani.*** Cultivated by ***E. Hágsater 13832.*** Holotype: AMO! (Illustration voucher).

Epidendro batesii Dodson simile sed foliis oblongis rotundatis, petalis lineari-ellipticis 3-nervatis, nervis ramosis, labello integro cordiformi, ad basem profunde cordato, apiculato, nectario breviore in 2/3 ovarii partes penetranti recedit.

Hierba epífita, ramificada, de ca. 35 cm de alto. **Raíces** basales, carnosas, delgadas. **Tallos** ramificados, tipo caña, lateralmente aplanados, delgados, ligeramente flexuosos, el basal de más de 11 x 0.3-0.4 cm; las ramificaciones cortas, escasas, volviendo a ramificarse de los entrenudos intermedios a superiores de la rama anterior, 8 x 0.25 cm. **Hojas** 10, distribuidas a lo largo de los tallos, subcoriáceas, alternas, erectas; vaina tubular, lateralmente comprimida, estriada y rugosa, 7-12 x 2.5-4.0 mm; lámina oblonga, ápice subredondeado, aristado, lisa, margen denticulado, 1.5-2.3 x 0.4-0.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, sésil; pedúnculo nulo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 5 mm de largo. **Flores** una a la vez, no resupinadas, amarillo verdosas con el labelo blanco níveo; sin fragancia. **Ovario** terete, ligeramente inflado ventralmente a lo largo de los 2/3 apicales, liso, 2.5 cm de largo. **Sépalos** extendidos, libres, oblongo elípticos, agudos, dorsalmente carinados, 7-nervados, 5-nervaduras principales y 2-cortas, margen entero, no ornamentados, 15-16 x 3.6-4.2 mm; los **laterales** oblicuos. **Pétalos** extendidos, libres, linear elípticos, agudos, 3-nervados, las nervaduras cortamente ramificadas, margen entero, 14 x 2.4 mm. **Labelo** unido a la columna, entero, cordiforme, profundamente cordado en la base, ápice apiculado, margen crenado, 12 x 11.5 mm; bicalloso, los callos laminares, delgados; provisto de una carina, lisa, baja, que se desvanece antes de llegar al ápice del labelo, superficie diminutamente tuberculada. **Columna** recta, delgada, obcónica en el ápice, 7 mm de largo. **Clinandrio** reducido, margen entero. **Antera** no vista. **Polinios** 4, obovoides, lateralmente comprimidos, desiguales. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando 2/3 del ovario, delgado, no inflado, liso. **Cápsula** no vista.

Epiphytic, branching **herb. Roots** basal, fleshy, thin. **Stems** branching, cane-like, laterally compressed, thin, slightly flexuous, the basal stem longer than the branches which are produced from the middle to upper internodes of the previous stem. **Leaves** 10, distributed throughout the stems, subcoriaceous, erect; sheath tubular, laterally compressed, striated and rugose; blade oblong, apex sub rounded, aristate, smooth, margin denticulate. **Inflorescence** apical, recemose, sessil. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** one at a time, non-resupinate, greenish yellow with the lip snow-white. **Ovary** terete, slightly inflated ventrally along the upper 2/3, smooth. **Sepals** spreading, free, oblong-elliptic, acute, dorsally carinate, 7-veined, 5 main veins with 2 secondary veins, margin entire. **Petals** spreading, free, linear-elliptic, acute, 3-veined, the veins short-branched, margin entire. **Lip** united to the column, entire, cordiform, deeply cordate at the base, apex apiculate, margin crenate; bicallose, the calli laminar, thin, provided with a low, smooth keel which disappears before the apex of the lip; surface minutely tuberculate. **Column** straight, thin, dilated towards the apex. **Clinandrium** reduced, margin entire. **Pollinia** 4, obovoid, laterally compressed, unequal. **Nectary** penetrating 2/3 of the ovary, narrow, smooth.

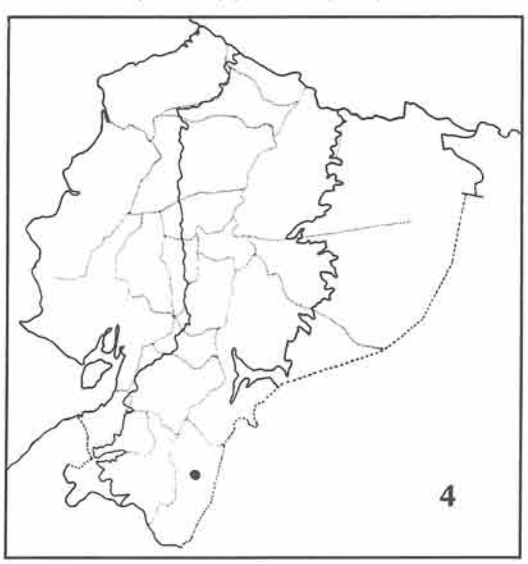
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from one cultivated plant said to have come from southeastern Ecuador, growing epiphytic at 1800 m altitude. Flowering in March.

RECOGNITION: *Epidendrum cardiobatesii* belongs to the Cardiophyllum Group, Batesii Subgroup, which is characterized by the main stem with a subapical branching habit, acute leaves, successive flowers, opening one at a time, deep nectary, entire to 3-lobed lip with the lateral lobes more or less fimbriate to erose. The new species has oblong, subrounded leaves, 15-16 mm-long sepals, linear-elliptic, 3-veined, branched petals and a deeply heart-shaped, apiculate lip. It is similar to *Epidendrum batesii* which has yellow to pinkish tepals with a white lip, 3-lobed lip with the midlobe short and truncate. *Epidendrum oxybatesii* Hágsater & Dodson has pale, yellowish green, concolor flowers, acuminate tepals, deeply 3-lobed lip with the semiovate, dolabriform, lateral lobes narrower at the junction, crenate to laciniate margin, and an acicular midlobe. *Epidendrum acrobatesii* Hágsater & Dodson has smaller flowers, the sepals being 11-12 mm-long, narrower, linear-oblanceolate, 1-veined petals and a truncate, obcuneate midlobe. *Epidendrum silverstonei* Hágsater has oblanceolate, rounded, 3-veined petals and an entire, suborbicular, deeply cordate lip. *Epidendrum farallonense* Hágsater has smaller flowers, and a large, rectangular, truncate midlobe of the lip. *Epidendrum laceratum* C. Schweinf. has narrow, linear-elliptic leaves, small flowers, 5.5-6 mm-long sepals, linear-elliptic, 3-veined petals and an entire, deeply lacerate lip with an entire, triangular- ovate, obtuse apex.

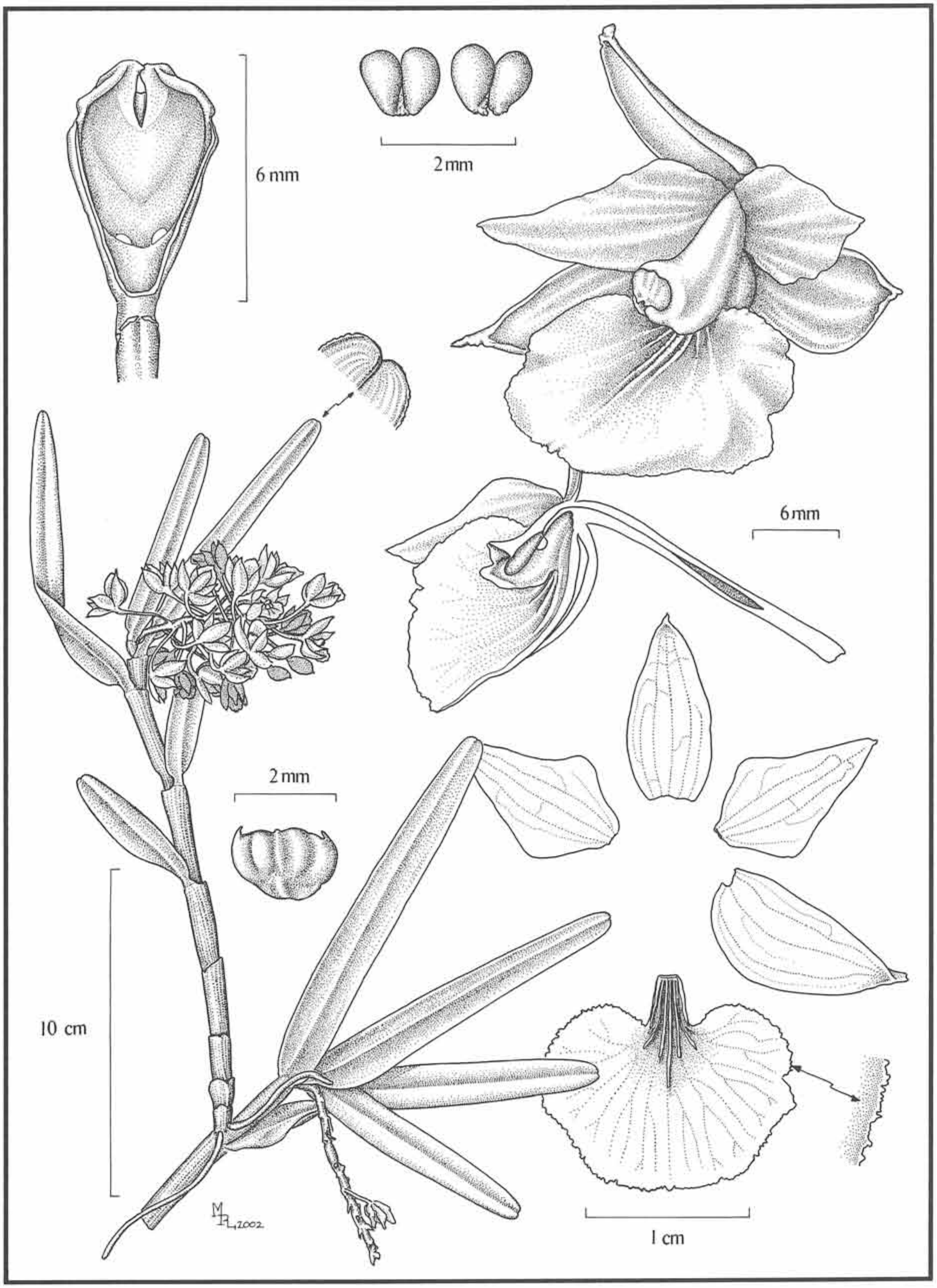
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek καρδυα- heart, and Bates in reference to the similarity between this species and *Epidendrum batesii* but differentiated by the deeply heart-shaped lip. Will L. Bates of Corpus Christi, Texas supported orchid work for many years, was a member of the Board of Trustees of the American Orchid Society and maintained a marvelous collection of hybrid and species orchids.



Authors: E. Hágsater & C. H. Dodson **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM CELICENSE Hágsater & Dodson

Plate 720

EPIDENDRUM CELICENSE Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Celica-Alamor Road, ca. 3 km W of Celica, 2200 m, epiphyte in secondary forest, 18 Feb 1985. ***G. Harling & L. Andersson 22172.*** Holotype: QCA! (Illustration voucher). Isotypes: AMES GB!

Epidendro diothonaeoide Schltr. simile sed foliis oblongo-lanceolatis ad apicem truncatis, inflorescentia multiflora densa, floribus minoribus membranaceis, columna breviore leviter sigmoidea, labello subreniformi ad basem cordato, disco 5 carinas tenues et nitidas ferenti abhorrens.

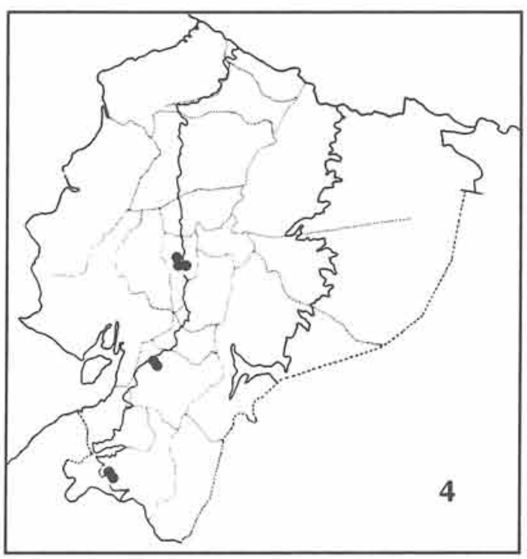
Hierba terrestre o epífita, ramificada, de más de 1 m de alto. **Raíces** de la base de la planta, escasas en la base de algunas ramificaciones, carnosas, gruesas, blancas, 3 mm de grosor. **Tallos** ramificados cuando maduros, tipo caña, teretes, gruesos, 0.6-0.9 cm de grosor; las ramas cortas, 6-15 x 0.5-0.9 cm. **Hojas** en las ramas 4-6, distribuidas hacia la zona media apical de los tallos, alternas, articuladas; vaina tubular, estriada y rugosa, 15-40 x 6-9 mm; lámina angostamente oblongo lanceolada, ápice truncado y bilobado, margen entero a diminutamente crenado, lisa, [4.8] 7.5-12 x 0.9-1.3 cm; en el tallo principal algo más grandes 9-12 x 1.2-1.5[1.9] cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada, densa, multiflora; 5.0-7.5 cm de largo; pedúnculo terete, corto, 10-13 mm de largo, provisto en la parte media de una bráctea semejante a las florales, triangular, aguda, 3-4 mm de largo; raquis terete, 4.5 cm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 2-4 mm de largo. **Flores** ca. 30, simultáneas, resupinadas, color miel a púrpura, el labelo con venas púrpura; sin datos de fragancia. **Ovario** terete, delgado, liso, no inflado, 13-17 mm de largo. **Sépalos** entreabiertos, libres, membranáceos, glabros, agudos, carinados dorsalmente, 3-nervados, las nervaduras laterales ramificadas desde la base, dando la apariencia de ser 5-nervado, margen entero; el **dorsal** ovado, 10-12.7[14] x 5-5.4[8] mm; los **laterales** elípticos, oblicuos, 11-13.4 x 6-6.8 mm. **Pétalos** entreabiertos, libres, trulados, agudos, 3-nervado, las nervaduras laterales ramificadas desde la base, dando la apariencia de ser 5-nervados, margen entero, 9.4-12[14] x 5.7-7[10] mm. **Labelo** unido a la columna de manera oblicua, angostamente unguiculado, base cordada, entero, subreniforme, diminutamente apiculado, margen diminutamente eroso; ecalloso, disco provisto de 5 quillas lisas, delgadas, bajas, la central alargada ca. de la mitad del largo del labelo, las laterales más cortas, 10-12.7 x 15-19.4 mm. **Columna** gruesa, ligeramente sigmoidea visto lateralmente, el ápice arqueado hacia arriba, no alada, 6-7 mm de largo. **Clinandrio** corto, entero. **Antera** reniforme, 4-locular, con una quilla central, roma: **Polinios** 4, obovoides. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de ¼ del largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, no ornamentado. **Cápsula** no vista.

Terrestrial or epiphytic, branching **herb. Roots** thick, fleshy. **Stem** cane-like, branching when mature, terete, thick, the branches shorter. **Leaves** 4-6 distributed towards the apical half of the branches, sheaths finely striated and rugose, blade narrowly oblong-lanceolate, apex truncate, bilobed, margin entire to minutely crenate. **Inflorescence** apical, racemose, arching, dense, many-flowered. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** ca. 30, simultaneous, resupinate, honey-colored to purple, the lip with the veins marked with purple. **Ovary** terete, thin, smooth. **Sepals** partly spreading, free, membranaceous, glabrous, acute, dorsally carinate, 3-veined, the lateral veins branching from the base so as to appear 5-veined, margin entire, **dorsal** ovate, **laterals** elliptic, oblique. **Petals** partly spreading, free, trullate, acute, 3-veined, the lateral veins branching from the base so as to appear 5-veined, margin entire. **Lip** oblique and narrowly united to the column, narrowly clawed, base cordate, subreniform, minutely apiculate, margin minutely erose; ecallose, the disc provided with 5 smooth, thin keels, the middle one longest, reaching the middle of the lip. **Column** thick, slightly sigmoid, the apex upturned, not winged. **Clinandrium hood** short, entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid. **Rostellum** subapical, slit. **Nectary** without penetrating the ovary, unornamented.

OTHER SPECIMENS: ECUADOR: Azuay: Parroquia Molleturo, San Pedro de Yumate, 2900 m, 27 II 1991, *Castellanos 286,* QCNE. El Chorro, ca. 6 km above Molleturo on road to Cuenca, 2800–2900 m, 7 III 1985, *Harling 22866,* AMES, GB! QCA! **Bolivar:** km 68, Babahoyo-Guaranda, 1650 m, 16 II 1991, *Dodson 18690,* QCA! QCNE! RPSC! Guaranda, 3000 m, *Hirtz 1584,* AMO! Old road Guaranda to Caluma, 2800 m, 10 III 1982, *Luer 7253,* SEL! **Loja:** Celica-Guachanamá, Roldós monument, 2700 m, 19 II 1985, *Harling 22266,* GB! QCA! Celica-Zapotillo, 2200 m, 23 II 1985, *Harling 22437,* AMES! GB! QCA! Cerro de Celica. Celica-Guachanamá, 2430 m, 15 IV 1994, *Jørgensen 255,* QCNE! Celica-Mercadillo, 25 II 1997, *Klitgaard 433,* QCNE!

DISTRIBUTION AND ECOLOGY: Known only from southwestern Ecuador, on the western slopes of the Andes from Guaranda (Bolivar) to Celica (Loja), in secondary forest and scrub, as well as on road-banks; between 2200 and 3000 m altitude. Flowering in February and April.

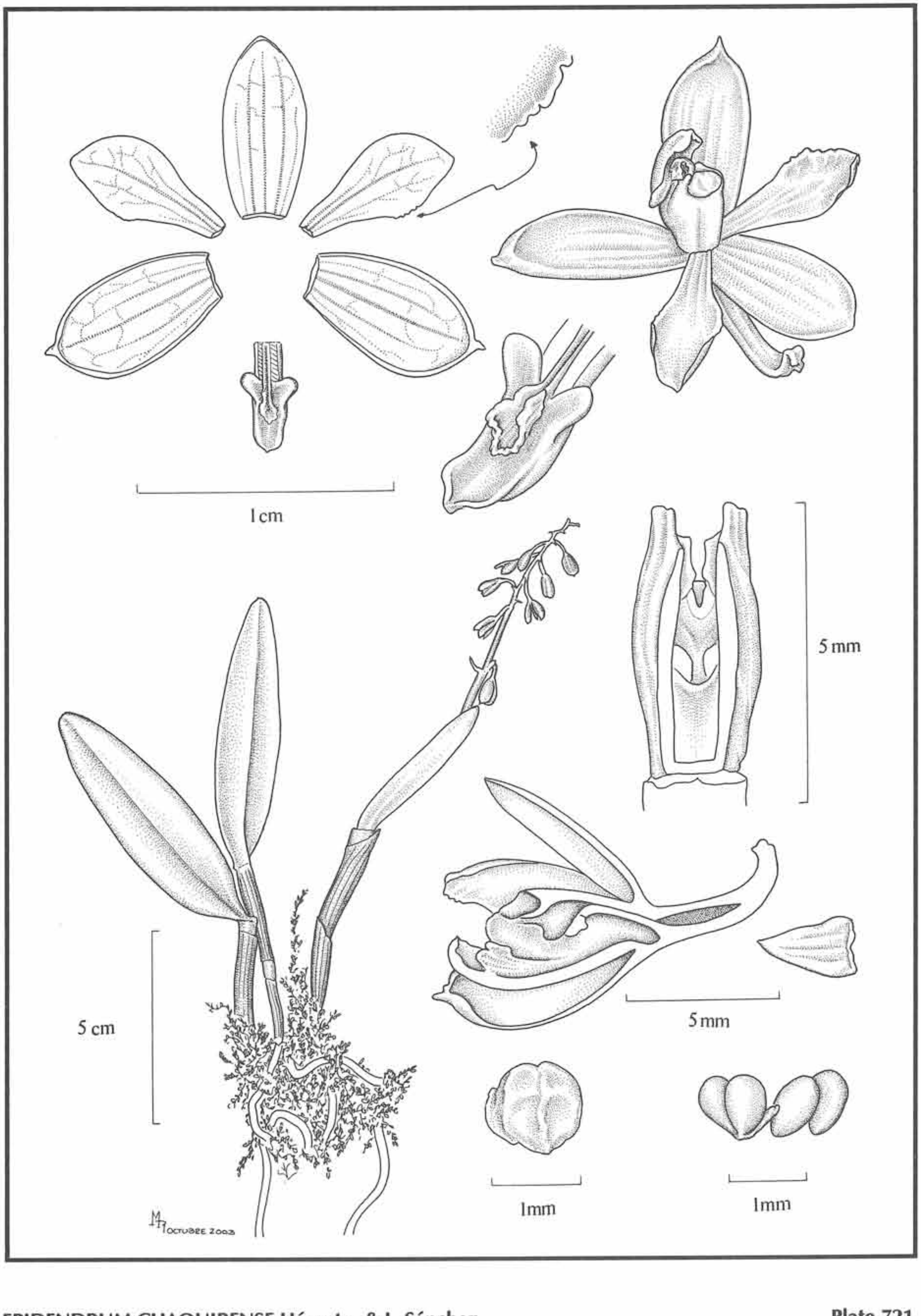
RECOGNITION: *Epidendrum celicense* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose without or with 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The new species is recognized by the long, oblong, truncate leaves, the short, dense inflorescence with up to 30 flowers, honey colored, the lip with purple veins, sepals and petals 9.4-12 [14] mm long, the petals trullate, the column sigmoid 6-7 mm long, the reniform lip united to the column, cordate base, with 5 narrow, smooth, thin keels. It is similar to *Epidendrum diothonaeoides*, which has lanceolate leaves, a lax-flowered inflorescence with up to 13 fleshy flowers, sepals 18-25 mm long, the 3 keels at the base of the lip are thickened and low, and the column is 10-12 mm long. *Epidendrum allisonii* Hágsater & Dodson has narrowly lanceolate leaves, a lax, 10-flowered inflorescence, the flowers large and fleshy, sepals [13]15-18 mm long, ovate petals, the reniform lip truncate at the base, with 6-7 thin, erose, keels, the three central ones thickened so that the lip appears three-callous, and the column is 8-9 mm long.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the town of Celica near where the type was collected.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM CHAQUIRENSE Hágsater & L. Sánchez

Plate 721

EPIDENDRUM CHAQUIRENSE Hágsater *et* L. Sánchez, *sp. nov.*

Type: COLOMBIA: Antioquia [as Bolivar]: Below Páramo de Cháquiro, shrub zone, 2800-3100 m; epiphytic herb, flowers brown, ***Francis W. Pennell 4347.*** Holotype: NY! (Illustration voucher). Isotype: AMES!

Epidendro sarcode Lindl. simile sed planta minor, caulibus unifoliatis, petalis latioribus margine ad apicem crenulato discrepans.

Hierba epífita, simpodial, subcespitosa, erecta, 15cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, delgadas, 1.0-1.7 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base, lateralmente aplanados hacia el ápice, 3.0-5.0 x 0.2-0.5 cm, el tallo nuevo se produce del 1°-2° entrenudo del tallo anterior, a unos 1.5 cm de la base; envuelto en la base por dos vainas tubulares, obtusas, papiráceas, 1.0- 2.0 x 0.3-0.6 cm. **Hojas** 1, en el ápice del tallo; vaina tubular, lateralmente aplanada, lisa; lámina elíptico lanceolada, coriácea, con una quilla dorsal, ápice desigualmente bilobado, margen entero, 6.8-7.0 x 1.5-1.9 cm. **Bráctea espatácea** 1, de lados casi paralelos, ancipitosa, ápice angostamente redondeado, 4.1 x 0.6 cm. **Inflorescencia** apical, racemosa, erecta, 10 cm de largo, raquis recto; pedúnculo algo lateralmente comprimido, recto, no ornamentado, 5 cm de largo, con 1 bráctea intermedia mucho más pequeña que la espatácea. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 1.4-1.8 mm de largo. **Ovario** no inflado, terete, no ornamentado, 5-6 mm de largo. **Flores** 13, simultáneas, no resupinadas; color café, sin datos de fragancia. **Sépalos** extendidos, libres, ligeramente cóncavos, elípticos, agudos, apiculados, 5-nervados, margen entero, 7.0-7.2 x 3.3-3.7 mm. **Pétalos** extendidos, libres, ligeramente cóncavos, rómbicos, obtusos, 3-nervados, margen entero en la base, ligeramente crenulado hacia el ápice, 6.1-6.4 x 3.0-3.2 mm. **Labelo** unido a la columna, reducido, trilobado, 2.8-3.0 x 2.0-2.2 mm; el callo es una lámina prominente, la cual se prolonga hasta la mitad del labelo, carnosa, cóncava, con margen irregularmente crenulado; lóbulos laterales muy reducidos, semiorbiculares, enteros, retrorsos; lóbulo medio prominente, subrectangular, ápice obtuso, apiculado, carnoso. **Columna** recta, gruesa, 5.0-5.2 mm de largo, con las alas apicales prominentes, redondeadas, laminares. **Clinandrio** reducido, entero. **Antera** subesférica, no ornamentada, 4-locular. **Polinios** 4, obovados, lateralmente aplanados, semejantes. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad de largo de la cavidad estigmática. **Nectario** traspasando ligeramente el perianto, amplio, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, subcaespitose **herb. Roots** few, basal, fleshy, thin. **Stems** simple, cane-like, laterally compressed above. **Leaf** 1, at the apex of the stem; sheath ancipitose; blade elliptic-lanceolate, margin entire, apex unequally bilobed. **Spathaceous bract** 1, sides nearly parallel, ancipitose, apex narrowly rounded. **Inflorescence** apical, racemose, erect, peduncle laterally compressed, with 1 intermediate bract, much shorter than the spathaceous bract. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** terete. **Flowers** 13, simultaneous, non-resupinate, brown. **Sepals** spreading, free, concave, elliptic, apiculate, 5-veined, margin entire. **Petals** spreading, rhombic, obtuse, 3-veined, margin entire. **Lip** united to the column, reduced, 3-lobed, unicallose, prominent, laminar, concave, thickened; lateral lobes semiorbicular; midlobe prominent, subrectangular, apex triangular. **Column** straight, thick, with prominent wings. **Clinandrium hood** reduced, entire. **Anther** subconical, 4-celled. **Pollinia** 4, subequal, obovate, laterally compressed. **Rostellum** subapical, slit. **Nectary** slightly penetrating the ovary, wide.

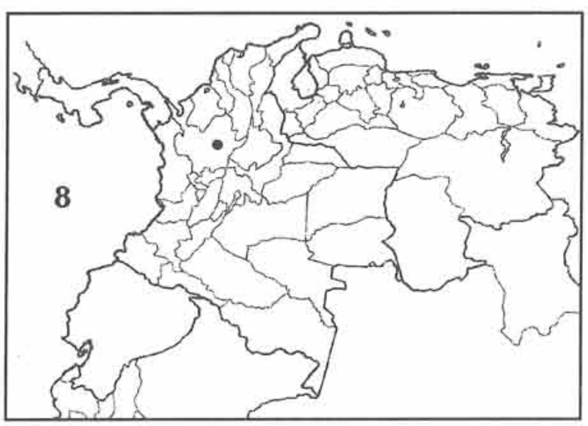
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from Colombia, from the northern end of the Cordillera Central. Epiphytic, in scrub vegetation, 2800-3200 m altitude. Flowering in February.

RECOGNITION: *Epidendrum chaquirense* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species can be recognized by short plants, 15 cm tall, with one leaf per stem, rhombic petals, (3.0-3.2 mm), crenulate towards the apex. It is similar to *Epidendrum sarcodes* from Colombia, Cordillera Oriental around Bogotá; but this species has taller plants 35-40 cm tall, with 4-6 leaves per stem and spatulate petals, 1.8-2.0 mm wide with the entire margin. *Epidendrum mancum* Lindl. has smaller plants, leaves and flowers, and an entire, reduced lip. *Epidendrum sarcoglottis* Schltr. is distinguished by the entire, acute, claw-like lip, with a concave, transverse platform-like callus, and linear-oblanceolate petals.

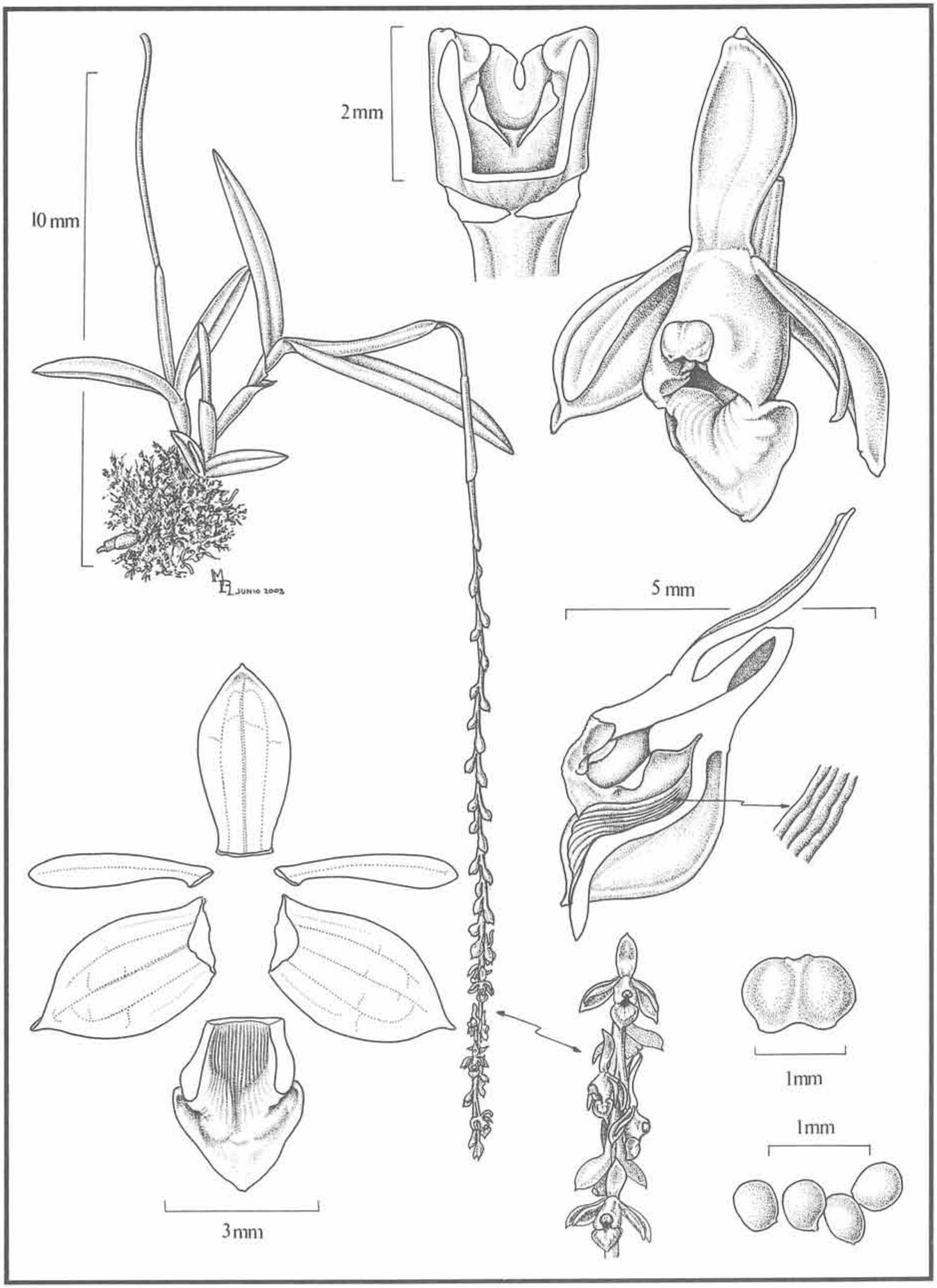
CONSERVATION STATUS: DD. Data deficient.

ETIMOLOGY: In reference to the type locality, the Páramo de Cháquiro. The collector places it in the department of Bolivar, but we have only been able to trace the locality in the department of Antioquia, east of Medellín. Other collecting records show that Pennell was collecting two days later nortwest of Medellín.



Author: L. Sánchez S. **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM CHIGUINDENSE Hágsater & Dodson **Plate 722**

EPIDENDRUM CHIGUINDENSE Hágsater et Dodson *sp. nov.*

Type: ECUADOR: Morona-Santiago; Chiguinda, 1600 m, collected by Hugo Medina Troyani, Hort. Ecuagenera, pressed 8 March 2003, ***E. Hágsater 13864.*** Holotype: QCNE! (Illustration voucher).

Epidendro carolii Schltr. simile sed foliis angustioribus et longioribus ad apicem rotundatis, floribus ex infloresantiae apice versus basem aparientibus, columna crassa brevi, labello triangulari, callo prominenti carnoso, litterae "V" ad instar, striato differens.

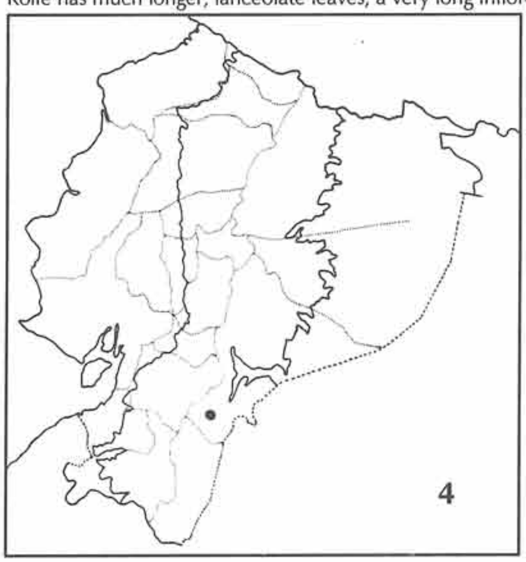
Hierba epífita, cespitosa, erecta, de 29 cm de alto. **Raíces** basales, delgadas, blancas, la punta pardo rojiza. **Tallos** sencillos, tipo caña, lateralmente comprimidos hacia el ápice, ligeramente sinuosos, cortos, 3-5.5 x 0.3-0.4 cm. **Hojas** 2-3, distribuidas hacia el ápice de los tallos, desiguales, la basal muy pequeña; vainas tubulares, lateralmente comprimidas, finamente estriadas en seco, 0.7-1.8 x 0.3-0.4 cm; lámina oblongo elíptica, ápice redondeado, quilla dorsal evidente, margen entero, gruesa, coriácea, lisa, verde, [1] 5.5-6.8 x [0.5] 0.8-1.0 cm. **Bráctea espatacea** 1, tubular, ancipitosa, larga, de lados paralelos, aguda, 4-5.5 x 0.2 cm. **Inflorescencia** apical, racemosa, florece una sola vez, arqueada nutante, tipo cola de rata, 25 cm de largo; pedúnculo alargado, terete, delgado, no ornamentado, 10.5 cm de largo; provisto de una bráctea tubular, aguda, ancipitosa, semejante a la espatácea, 2.5 x 0.1 cm; raquis terete, delgado, recto, 14.5 cm de largo. **Brácteas florales** tan largas como el ovario, triangulares, agudas, abrazadoras, 2 x 0.7 mm. **Flores** 40, dispuestas de manera helicoidal a lo largo del raquis, sucesivas, abriendo del ápice de la inflorescencia hasta la base, resupinadas, de color verde, concoloras; sin fragancia. **Ovario** terete, delgado, muy corto, no inflado, liso, 1.6-2.0 mm de largo. **Sépalos** libres, obovados, subagudos, diminutamente apiculados, ligeramente cóncavos hacia el ápice, 3-nervados, los laterales con un par de nervaduras cortas dando la apariencia de ser 5-nervados; margen entero, 3.6-4.3 x 1.6-2.0 mm; el **dorsal** reflexo; los **laterales** entreabiertos. **Pétalos** adpresos a los sépalos laterales, libres, linear oblanceolados, redondeados, en la base oblicua cortamente ensanchados, 1-nervados, margen extendido y entero, 3.6 x 0.6 mm. **Labelo** unido a la columna, entero, anchamente triangular, base cordada, margen entero, 2.0 x 2.5 mm; unicalloso, el callo prominente, transversal, amplio, en forma de "V", carnoso, estriado y convexo; desprovisto de quillas. **Columna** recta, corta, gruesa, 2.1 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, sublenticulares, diminutamente apiculados. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de más de la mitad del largo de la cavidad estigmática. **Nectario** sin penetrar el ovario, ancho frente a la cavidad estigmática, cortamente estrecho en la base, estriado, las estrías continuadas sobre el callo. **Cápsula** no vista.

Epiphytic, caespitose, erect **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, laterally compressed above, somewhat sinuous, short. **Leaves** 2-3, distributed towards the apex of the stems, unequal, the basal one much reduced; sheaths tubular, laterally compressed, minutely striated when dry; blade oblong-elliptic, apex rounded, with an evident dorsal keel, margin entire, thickly coriaceous, smooth, green. **Spathaceous bract** tubular, ancipitose, parallel-sided, acute. **Inflorescence** apical, racemose, flowering only once, arching nutant, rattail-like; peduncle elongate, terete, thin, smooth, provided with one tubular bract similar to the spathaceous bract but shorter; rachis terete, thin, straight. **Floral bracts** as long as the ovary, triangular, acute. **Flowers** 40, distributed in a helicoidal pattern throughout the rachis, successive, opening from the apex of the inflorescence towards the base, resupinate, green, concolor. **Ovary** terete, thin, very short, smooth. **Sepals** free, obovate, slightly concave apically, subacute, minutely apiculate, 3-veined, the laterals reduced so as to appear 5-veined, margin entire, the **dorsal** reflexed, **laterals** partly spreading. **Petals** appressed to the lateral sepals, free, linear-oblanceolate, rounded, the base abruptly widened, 1-veined, margin entire. **Lip** united to the column, entire, widely triangular, base cordate, margin entire; callus transverse, fleshy-thickened, "V" shaped, striated, convex. **Column** straight, thick, short. **Clinandrium hood** reduced, margin entire. **Anther** reniform, 4-celled. **Nectary** without penetrating the ovary, wide in front of the stigmatic cavity, striated, the grooves continue over the callus.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the eastern slope of the Andes in southern Ecuador, at 1600 m altitude, without further information. Flowering in March-April.

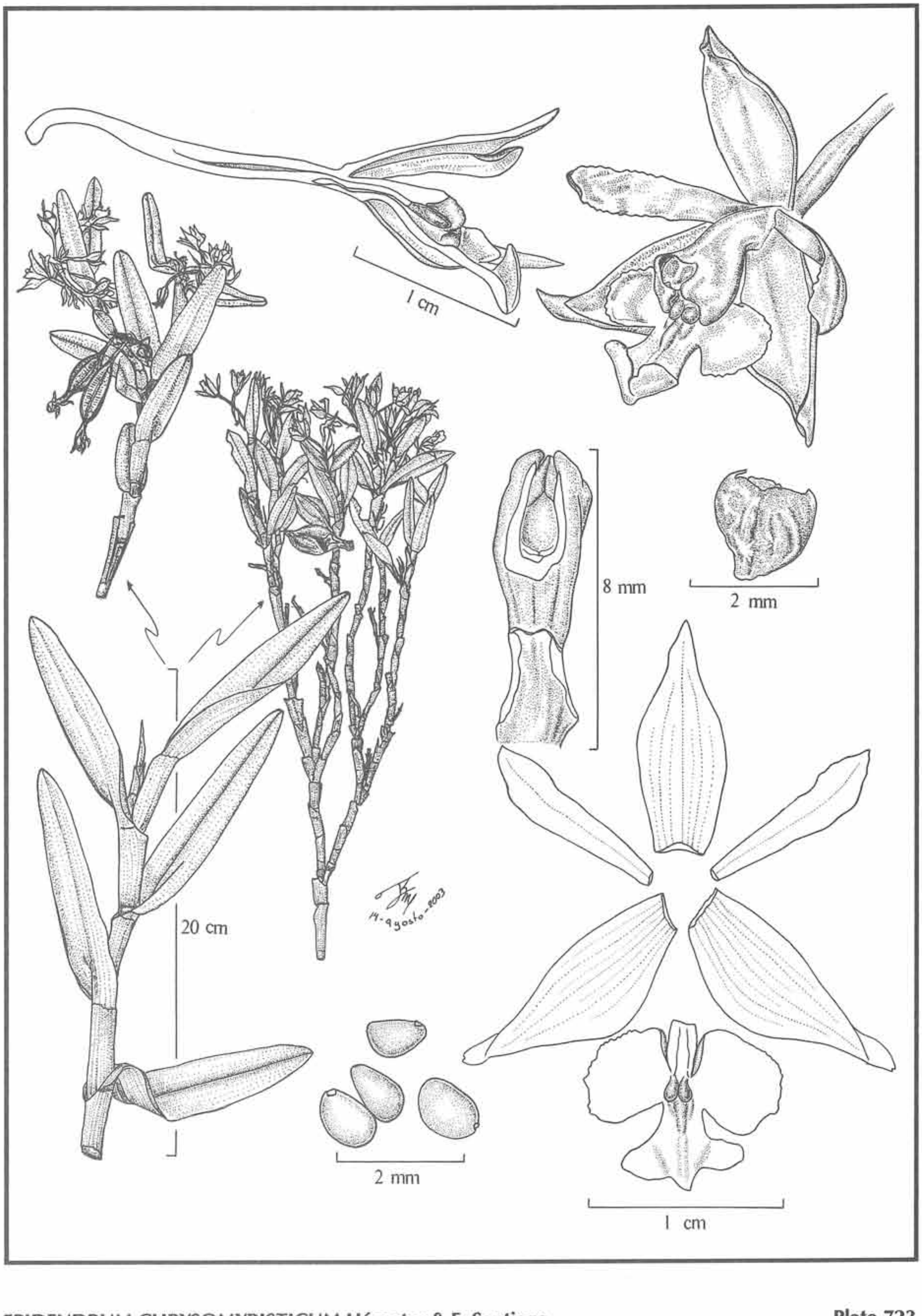
RECOGNITION: *Epidendrum chiguindense* appears to belong to the Carolii Group which is characterized by the caespitose habit, short, unbranched, laterally compressed stems, thick, coriaceous leaves, and the long, arching, nutant, rat-tail-like inflorescence with a long, narrow spathaceous bract at the base, and the numerous, green, successive flowers. The new species is recognized by the green flowers which open from the apex of the inflorescence towards the base, the triangular, cordate lip with a prominent, fleshy, striated, "V" shaped callus. Vegetatively it is similar to *Epidendrum carolii* which has relatively short, ovate leaves and the yellow and brown flowers of that species open from the base of the rachis towards the apex, and the lip is ecallose, large and deeply reniform. *Epidendrum laucheanum* Rolfe has much longer, lanceolate leaves, a very long inflorescence with numerous green and brown flowers with an ecallose, reniform lip. *Epidendrum opiranthizon* Hágsater & Dodson shares the rare feature of the flowers opening from the end of the inflorescence towards the base, but that species does not have any spathaceous bract, the column is longer and thin at the base, and the lip is obscurely 3-lobed with 3 prominent, laminar keels at the base.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the village of Chiguinda, near where the species is said to have been collected.

Authors: E. Hágsater & C. H. Dodson **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM CHRYSOMYRISTICUM Hágsater & E. Santiago

Plate 723

EPIDENDRUM CHRYSOMYRISTICUM Hágsater et E. Santiago, *sp. nov.*

Type: PERÚ: Cuzco. La Convención, near Camp 7, ca. 28 km walking distance NE from Hacienda Luisiana and the Apurimac River, 3400 m, ***T. R. Dudley 11213.*** Holotype: F! (Illustration voucher). Isotype: MO!

Epidendro fruticulo Schltr. simile sed foliis acutis longioribus, floribus leviter majoribus, petalis acutis, labelli lobuli medii latitudine longitudinem interdum aequanti differt.

Hierba epífita o litófita, erecta, ramificada, formando grandes arbustos, hasta 180 cm de alto. **Raíces** basales, raramente de las ramificaciones, gruesas, carnosas, 2.5-4.6 mm de grosor. **Tallos** profusamente ramificados en el ápice, tipo caña, teretes; el principal ligeramente flexuoso, 0.6-1.26 cm de grosor; las ramificaciones rectas, los tallos secundarios, 4-6 x 0.2-0.27 cm; tallos terciarios, 2-5 x 0.2-0.32 cm; todas las ramificaciones producidas cerca del ápice del tallo anterior, ocasionalmente ramificadas. **Hojas** numerosas en el tallo principal, 2-4 en los secundarios y terciarios, distribuidas hacia la mitad apical de los mismos, alternas, articuladas, dirigidas hacia arriba, caedizas; vaina infundibuliforme, estriada, rugosa, 4-22 mm de largo; lámina lanceolada a angostamente elíptica, subaguda, con una quilla dorsal baja, margen entero, coriácea; las del tallo principal, 2.8-11.5 x 1.0-2.2 cm; las de los tallos secundarios y terciarios, 1.2-5.5 x 0.5-1.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, arqueado-nutante, 1.5-2.5 cm de largo; pedúnculo terete, delgado, corto, desprovisto de brácteas, 3-4 mm de largo. **Brácteas florales** cerca de la mitad del largo del ovario, lanceoladas, acuminadas, abrazadora, gradualmente más pequeñas, 5-11 mm de largo. **Flores** 7, simultáneas, resupinadas, de color amarillo oro brillante ocasionalmente con difuminaciones rojizas, muy fragantes. **Ovario** terete, delgado, liso, no inflado, 7-20 mm de largo. **Sépalos** entreabiertos, obovado elípticos, acuminados, 7-nervados, margen entero, 10-12.5 x 3.5-4.8 mm; los **laterales** oblicuos, aristados, con quilla dorsal muy prominente. **Pétalos** entreabiertos, libres, linear oblanceolados, agudos, 1-nervados, margen apical ligeramente irregular, 9-10 x 1.5-2.2 mm. **Labelo** unido a la columna, trilobado, profundamente cordado en la base, 7-8.4 x 8-10 mm; bicalloso, los callos pequeños, globosos; disco provisto de tres quillas lisa, subagudas, el par lateral más corto; lóbulos laterales oblicuamente subrectangulares, margen eroso, 3.6-4.2 x 4-5 mm; lóbulo medio anchamente en forma de "T", con el itsmo cuneado y los lóbulos perpendiculares angostos, anchamente apiculado en el ápice, margen entero, 3.3-4.2 x 4-6.2 mm. **Columna** recta, delgada en la base y obcónica en el ápice, 7-8 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** poco profundo, apenas penetrando justo detrás del perianto, angosto, no ornamentado. **Antera** ovoide, aguda, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, desiguales. **Cápsula** no vista.

Epiphytic or lithophytic, branching, erect **herb. Roots** basal, thick, fleshy. **Stems** profusely branched apically, erect, cane-like, terete, the main stem somewhat flexuous, thick, the secondary branches progressively thinner, each new stem produced from a subapical node of the previous stem, sometimes branching. **Leaves** numerous on the main stem, 2-4 on the branches, distributed throughout; sheaths infundibuliform, striated, rugose; blade lanceolate to narrowly elliptic, subparallel, subacute, with a low dorsal keel, coriaceous, margin entire, those of the main stem about twice as large as those of the secondary stem, and up to six times larger than those of the tertiary stems. **Inflorescence** apical, racemose, flowering only once, arching-nutant; peduncle terete, thin, short, without bracts. **Floral bracts** about half as long as the ovary, lanceolate, acuminate, the apical ones gradually shorter. **Flowers** 7, simultaneous, resupinate, bright golden yellow to slightly reddish, very fragrant. **Ovary** terete, thin, smooth. **Sepals** partly spreading, obovate-elliptic, acuminate, 7-veined, margin entire, the **laterals** oblique, aristate, with a prominent dorsal keel. **Petals** partly spreading, free, linear-oblanceolate, acute, 1-veined, apical margin slightly irregular. **Lip** united to the column, 3-lobed, base deeply cordate, the lateral lobes larger than the apical lobe; bicallose, the calli small, globose; disc provided with three smooth keels, the laterals shorter; lateral lobes obliquely subrectangular, margin erose; midlobe widely "T" shaped, with a cuneate isthmus and narrow perpendicular lobes, the apex widely apiculate, margin entire. **Column** straight, the apex dilated. **Clinandrium hood** reduced, entire. **Rostellum** apical, slit. **Nectary** shallow, slightly penetrating the ovary, narrow, smooth. **Anther** ovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, unequal.

OTHER SPECIMENS: BOLIVIA: La Paz: Sud Yungas, 2950 m, 29 I 1980, *Luer 5019,* SEL! Murillo, Valle del Río Zongo, 3400 m, 3 X 1982, *Solomon 8344,* AAU! MO! SEL! Yungas, 4.7 km SE of Unduavi, 2900 m, 7 XI 1982, Ibid. *8743,* MO! Murillo, Valle del Río Zongo, 3400 m, 8 XI 1987, Ibid. *17288,* SEL! Río Unduavi, 3200 m, II 1980, *Uves-Vásquez-Lara 280,* SEL! **PERU: Ayacucho:** La Mar: Between Tambo San Miguel and Ayna and the Hacienda Luisiana, 3400-3600 m, 24 VIII 1968, *Dudley 12037,* MO! **Cuzco:** Quispicanchi: 2 km from Marcapata, 3000 m, 22 VII 1978, *Aronson 539,* AAU x2! AMES! MO! SEL!

DISTRIBUTION AND ECOLOGY: Known from Bolivia and southern Peru, in the departments of Cuzco and Ayacucho on the eastern slopes of the Andes, uncommon, growing epiphytic in Elfin cloud forest at 2900-3600 m altitude. Flowering throughout the year.

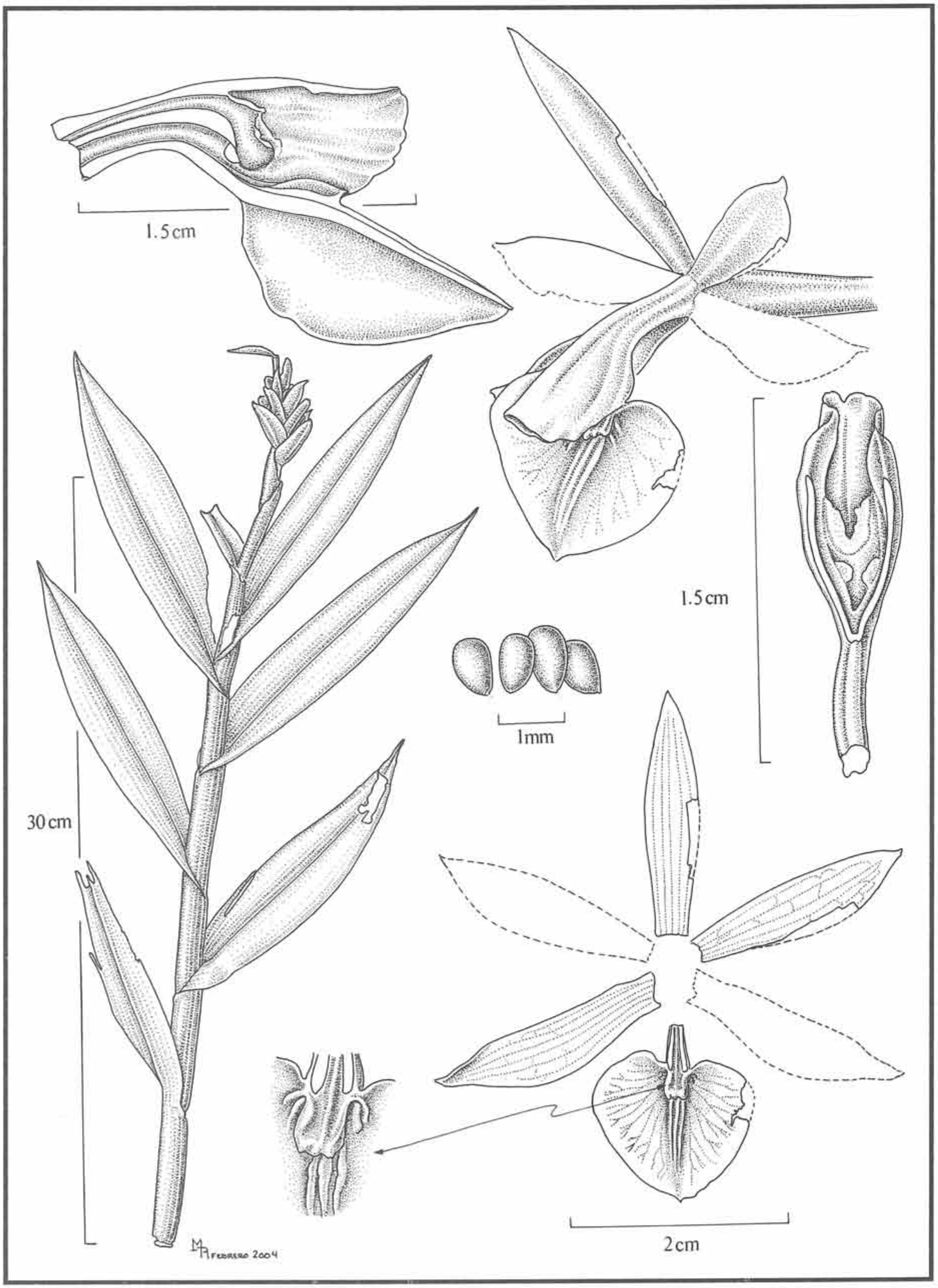


5

RECOGNITION: *Epidendrum chrysomyristicum* belongs to the Soratae Subgroup of the Scabrum Group which is characterized by the branching habit starting on a primary stem, infundibuliform, rugose leaf-sheaths, lanceolate, aristate, acute leaves, racemose subcapitate inflorescence on a short, thin peduncle, and the bicallose lip. The species can be recognized by the very tall, shrub-like habit, on a robust main stem which has leaves considerably larger than those of the branches, the golden yellow, very fragrant flowers, and the 3-lobed lip with a "T" shaped midlobe with a wide apicule. It resembles *Epidendrum fruticulum* Schltr. which also has a deeply, 3-lobed lip, with the midlobe rectangular, twice as long as it is wide and bilobed at the apex, but narrow, and 6-9 mm-long sepals and petals, the leaves of the branches are elliptic and rounded. *Epidendrum angustissimum* Lindl. (syn. *Epidendrum chortophyllum* Schltr.) has very narrow, linear-lanceolate leaves, the new stem produced from an upper internode of the previous one, and the lip 3-lobed, the lobes about equal in size and margins erose. *Epidendrum soratae* Rchb.f. has a reniform, apically somewhat 3-lobed, bicallose lip, and 6-7 mm long sepals. *Epidendrum obliquum* Schltr. has a reniform, emarginate lip 4 x 8 mm in size and a straight column and uninflated nectary. *Epidendrum cardenasii* Hágsater has larger flowers, 12-13 mm long sepals, the lip bilobed, widely emarginate and about as long as it is wide, the base short cordate and the calli laminar and divaricate. *Epidendrum cartilaginiflorum* Rchb. f. has a cordiform, somewhat 3-lobed-lip, apex obtuse, rounded, and the sepals are 15 mm long.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek χρυσο-, gold in compound words, and μυρστικος- fragrant, in reference to the bright yellow, fragrant flowers.



EPIDENDRUM CHUSPIPATENSE Hágsater & R. Vásquez

Plate 724

EPIDENDRUM CHUSPIPATENSE Hágsater et R. Vásquez, *sp. nov.*

Type: BOLIVIA: La Paz: Nor Yungas; 13 km NE (below) Chuspipata (16 Km S of Yolosa), 16° 16'S 67° 47'W, 2150 m, 19 July 1982, ***James C. Solomon 8075***. Holotype: SEL! (Illustration voucher). Isotype: MO!

Epidendro hexagono Hágsater & Dodson simile sed floribus luteis usque dilute viridibus, columna labelloque albo, labello cordiformi et obtuso usque suborbiculari et emarginato, ad basem cordato, columna ad basem gracili, clinandrio prominenti recto multo longiore quam columnae corpus divergens.

Hierba terrestre, cespitosa, erecta, hasta 150 cm de alto. **Raíces** basales. **Tallos** sencillos, tipo caña, lateralmente aplanados, ancipitosos, rectos, ca. 100 x 1.0 cm. **Hojas** numerosas, 6+, distribuidas a lo largo de la mitad apical del tallo, alternas, subiguales en tamaño; vaina tubular, ancipitosa, estriada, 1.3-5 x 0.54-1.0 cm; lámina elíptica, cortamente acuminada, margen entero, 5-16 x 0.9-3.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, erecta, produce varios racimos con el tiempo, 9 cm de largo; pedúnculo elongado, 2-5 cm de largo; oculto en su casi totalidad por 2 vainas tubulares, ancipitosas, conduplicadas, agudas, 3.5-6.3 x 0.5-0.9 cm. **Brácteas florales** ligeramente más cortas que el ovario, lanceoladas, subagudas, ancipitosas, conduplicadas, imbricadas, gradualmente más pequeñas hacia el ápice, 16-24 x 5-6 mm. **Ovario** terete, delgado, liso, inflado hacia el tercio apical, no ornamentado, ca. 15 mm de largo. **Flores** 6+, sucesivas, se desarrolla una a la vez, resupinadas, sépalos y pétalos amarillo a verde pálido, columna y labelo blancos; sin datos de fragancia. **Sépalos** extendidos, libres, oblongo oblanceolados, agudos, 5-nervados, margen entero, extendido, 21-22 x 5-5.4 mm; los **laterales** oblicuos. **Pétalos** extendidos, libres, lineares a oblanceolados, agudos, 3-nervados, margen entero, 18-20 x 1-5.4 mm. **Labelo** unido a la columna, recurvado hacia la mitad en posición natural, entero a bilobado, base cordada, cordiforme y obtuso a suborbicular y emarginado, diminutamente apiculado, margen entero, 13 x 15 mm; callo tridentado, con 2 pares de venas laterales cortas, lisas y tres quillas delgadas, lisas, bajas, decurrentes que se desvanecen antes del ápice del labelo. **Columna** recta, delgada en la base, el ápice de la columna fuertemente arqueado hacia abajo, pero escondida debajo del clinandrio largo y ancho, 15 mm de largo, incluyendo el clinandrio. **Clinandrio** muy prominente, ancho, sobrepasando el cuerpo de la columna, margen ligeramente irregular. **Antera** 4-locular, ovoidea, truncada. **Polinios** 4, obovoides. **Rostelo** a la mitad de la columna, incluyendo el clinandrio, hendido. **Lóbulos laterales del estigma** de ½ del largo de la cavidad estigmática. **Nectario** penetrando casi la mitad del ovario y ligeramente inflado, liso. **Cápsula** no vista.

Tall, erect, caespitose, terrestrial **herb.** **Stems** simple, cane-like, laterally compressed, ancipitose, straight. **Leaves** numerous, 6+, distributed throughout the apical half of the stem, alternate, subequal; sheaths tubular, ancipitose, striated; blade elliptic, short-acuminate, margin entire. **Inflorescence** apical, racemose, erect, producing several racemes with time; peduncle elongate, totally covered by 2 tubular, ancipitose, conduplicate, acute bracts. **Floral bracts** slightly shorter than the ovary, lanceolate, subacute, ancipitose, conduplicate, imbricating, the apical ones gradually shorter. **Ovary** terete, thin, smooth. **Flowers** 6+, successive, developing one at a time, resupinate, sepals and petals pale yellow to green, column and lip white. **Sepals** spreading, free, oblong-oblanceolate, acute, 5-veined, margin entire, spreading; the **lateral** sepals oblique. **Petals** spreading, free, oblanceolate to linear, acute, 3-veined, margin entire. **Lip** united to the column, revolute at the middle in natural position, entire to bilobed, cordiform and obtuse to suborbicular and emarginate, base cordate, apex obtuse, minutely apiculate, margin entire; callus tridentate, followed by 3 low, smooth, decurrent, parallel keels that disappear before the apex of the lip, with 2 pairs of short, lateral keels on the side of the callus. **Column** externally straight, thin at the base, the apex of the body arching strongly downwards, but hidden by the large, wide, apical clinandrium hood;. **Clinandrium hood** very prominent, much surpassing the body of the column, straight, ample, margin somewhat irregular. **Anther** ovoid, truncate, 4-celled. **Pollinia** 4, obovoid. **Rostellum** at the middle of the column, including the clinandrium hood, slit. **Nectary** penetrating nearly half the ovary, somewhat inflated, smooth.

OTHER SPECIMENS: BOLIVIA: La Paz: Nor Yungas: entre la cumbre de Chuspipate y Coroico, 2590 m, terrestre en taludes, bosque húmedo montano, 15 I 1988, *Vásquez 1052*. VASQ! (Illustration, VASQ, xerox AMO). **Cochabamba:** Arani; El Limbo, 2180 m, 14 VI 2003, *Altamirano 874*, MO!

DISTRIBUTION AND ECOLOGY: Known only from western Bolivia, Provinces of La Paz and Cochabamba, in the Unduavi Valley, terrestrial on road banks in humid montane forest, between 2150-2590 m altitude. Flowering from January to July.

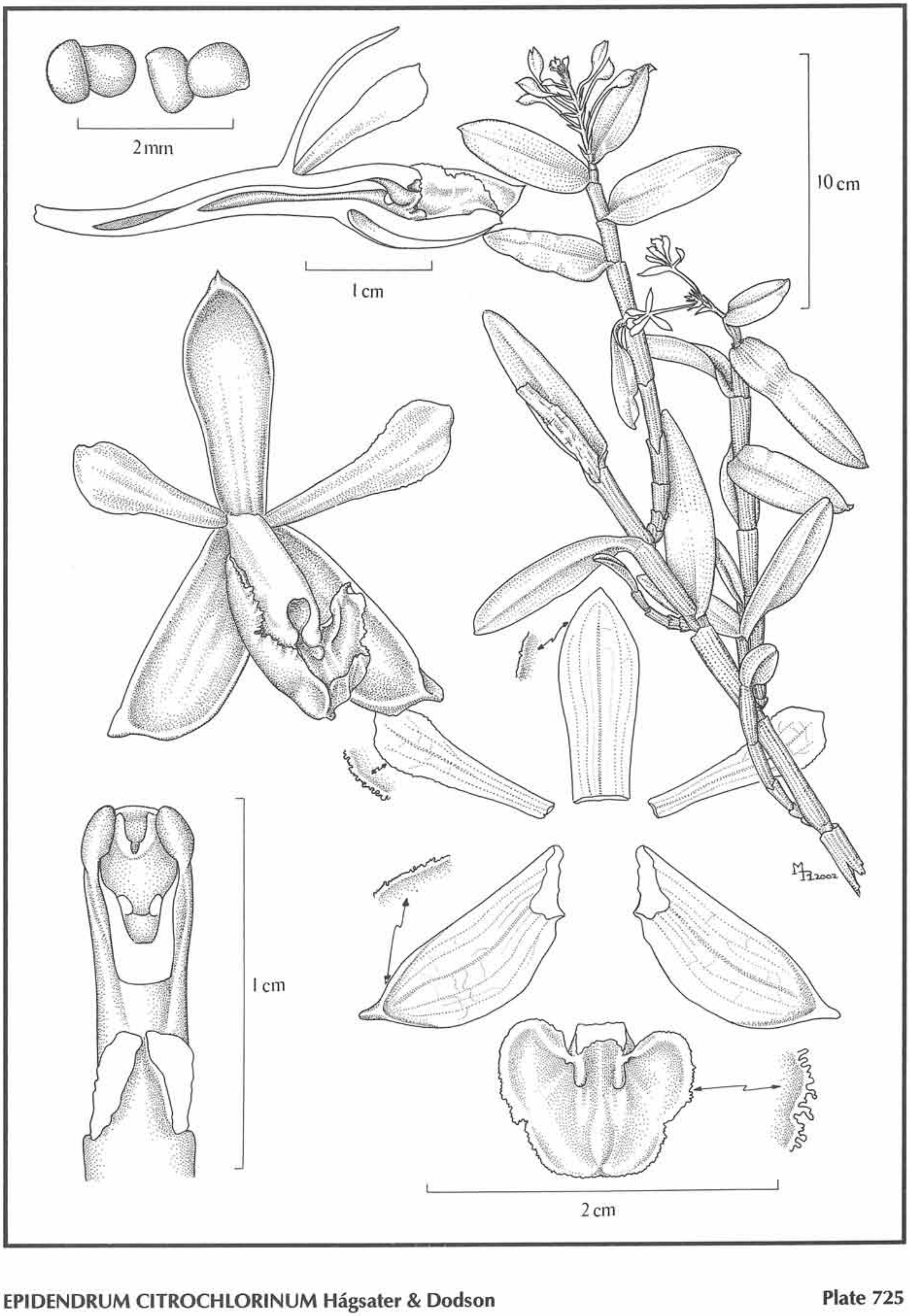
RECOGNITION: *Epidendrum chuspipatense* belongs to the Albertii Group and Subgroup which is characterized by the caespitose habit, with numerous, green or purple-colored leaves, the laterally flattened stems with apical and lateral inflorescences, the apical one with an ancipitose peduncle terminating in a conduplicate spathaceous bract somewhat larger but similar to the floral bracts, and one to several racemes of imbricating, conduplicate, rounded bracts which produce one flower at a time. The species is recognized by the tall, ancipitose stems, the peduncle completely covered by conduplicate bracts, successive, pale yellow flowers, the column and lip white, cordiform and obtuse to suborbicular and emarginate lip, with the column thin at the base and expanded into a prominent, straight, wide clinandrium hood, much longer than the body of the column which is hidden and arching downwards. It is similar to *Epidendrum hexagonum* from northwestern Ecuador which has green flowers, a hexagonal, truncate lip and a short, entire clinandrium hood.



CONSERVATION STATUS: DD. Date deficient.

ETYMOLOGY: In reference to the town of Chuspipata, near where the species has been collected.

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EPIDENDRUM CITROCHLORINUM Hágsater & Dodson

Plate 725

EPIDENDRUM CITROCHLORINUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Zamora-Chinchipe: Loja-Zamora, km 17.7 below pass, 8040 ft, 11 IX 1999, ***E. Hágsater & C.H. Dodson 12343.*** Holotype: QCNE! (Illustration voucher). Isotype: AMO! (Spirit).

Epidendro jimburensi Hágsater & Dodson simile sed floribus minoribus luteis-viridibus pallidis, petalis spathulatis unguiculatis divergens.

Hierba epífita y litófita, erecta, monopodial, ramificada arriba. **Raíces** basales, gruesas. **Tallos** tipo caña, teretes, delgados, ramificados arriba, 0.4-0.55 cm de grosor. **Hojas** numerosas en el tallo principal, pocas en las ramas, alternas, subcoriáceas; vainas tubulares, finamente estriadas, 1.5-2 x 0.4-0.55 cm; lámina angostamente elíptica, ápice desigualmente bilobado, margen entero, lisa, 2.7-5.2 x 0.9-1.25 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, subumbeliforme, erecta, corta, 2.3 cm de largo; pedúnculo corto, terete, delgado, recto. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 3 mm de largo. **Flores** 9, simultáneas, no resupinadas, verde claro, concoloras; sin fragancia. **Ovario** terete, delgado, liso, no inflado, 22 mm de largo. **Sépalos** extendidos, libres, ápice obtuso, con una quilla dorsal, 5-nervados, margen entero, 14.5-15.5 x 5.5-6.2 mm; el **dorsal** angostamente obovado ligulado, los **laterales** elíptico obovados, oblicuos. **Pétalos** extendidos, libres, espatulados, unguiculados, obtusos, diminutamente apiculados, 3-nervados, margen denticulado, 12 x 4.4 mm. **Labelo** unido a la columna, entero, reniforme, base ligeramente cordada, ápice ligeramente emarginado, margen denticulado, 8.8 x 14.5 mm; bicalloso, los callos pequeños, delgados, provisto de una quilla central, prominente, ancha, subaguda, lisa, llega al ápice sin formar mucrón. **Columna** ligeramente arqueada en el ápice, delgada en la base, ligeramente más ancha en el ápice, 9 mm de largo. **Clinandrio** corto, margen entero. **Antera** obovoide, 4-locular, con una quilla central lisa, baja, margen apical denticulado. **Polinios** 4, obovoides, lateralmente ligeramente comprimidos; caudículas suaves y granulosas, tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** muy prominentes, ocupando casi en su totalidad la cavidad estigmática. **Nectario** corto, penetrando 1/3 del ovario, delgado, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic and lithophytic, erect, monopodial, **herb**, branching above. **Roots** basal, thick. **Stems** cane-like, terete, thin, branched above. **Leaves** numerous on the main stem, few on the branches, alternate, subcoriaceous; sheaths tubular, minutely striated; blade narrowly elliptic, apex unequally bilobed, smooth, margin entire. **Inflorescence** apical, racemose, subumbelliform, erect, short; peduncle short, terete, thin, straight. **Floral bracts** much shorter than the ovary, triangular, acute, embracing. **Flowers** 9, simultaneous, non-resupinate, pale green, concolor; without fragrance. **Ovary** terete, thin, smooth. **Sepals** spreading, free, apex obtuse, with a dorsal keel, 5-veined, margin entire; the **dorsal** narrowly obovate-ligulate, the **laterals** elliptic-obovate, oblique. **Petals** spreading, free, spathulate, unguiculate, obtuse, minutely apiculate, 3-veined, margin denticulate. **Lip** united to the column, entire, reniform, base slightly cordate, apex somewhat emarginate, margin denticulate; bicallose, the calli small, thin, provided with a long, central keel, wide, thick, subacute, smooth. **Column** slightly arching at the apex, thin at the base, slightly wider at the apex. **Clinandrium hood** short, margin entire. **Anther** obovoid, 4-celled, with a low central keel, apical margin truncate, denticulate. **Pollinia** 4, obovoid, slightly laterally compressed; caudicles soft and granulose, as long as the pollinia. **Rostellum** apical, slit. **Lateral lobes of the stigmatic cavity** very prominent, nearly as long as the cavity. **Nectary** short, penetrating 1/3 of the ovary, thin, smooth.

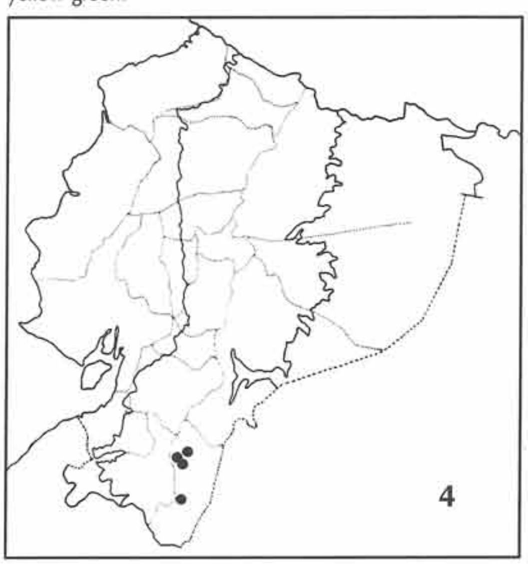
OTHER SPECIMENS: ECUADOR: Zamora-Chinchipe: km 20 Loja-Zamora, 2200 m, 26 VII 1985, *Dodson 16103*, MO! (Illustration, AMO!) QCNE! Loja-Zamora, 8040 ft, 11 IX 1999, *Hágsater 12350*, AMO! Arriba de Quebrada San Francisco, 2113 m, 28 I 2004, *Hágsater 14065*, AMO! (Spirit) Ibid. *14066*, AMO! (Spirit) *Hágsater 14067*, AMO! (Illustration, AMO!) El Cachaco, 2491 m, 28 I 2004, *Hágsater 14071*, AMO! (Spirit) Loja-Zamora, E of Pass, 2400-2700 m, 11 II 1982, *Harling 20596*, GB! Loja-Zamora km 17, 2300 m, 19 XII 1995, *Merino 4730*, LOJA!

DISTRIBUTION AND ECOLOGY: Known only from the eastern slopes of the Andes in southern Ecuador, at 2100-2500 m altitude, growing lithophytic on rocky roadbank. Flowering from July to February.

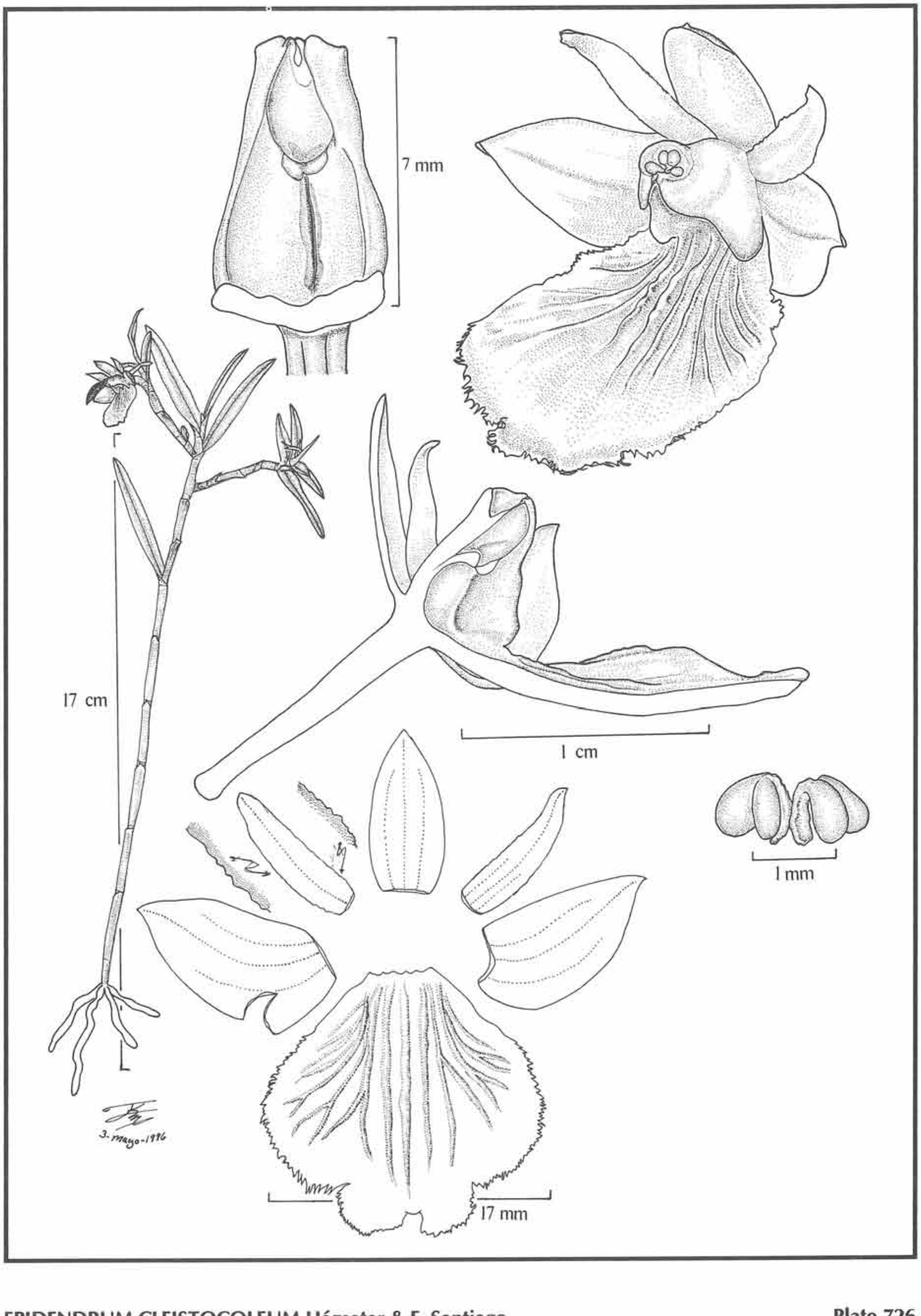
RECOGNITION: *Epidendrum citrochlorinum* belongs to the Cernuum Group, Orgyale Subgroup which is characterized by the monopodial stem branching above, subcoriaceous, bilobed to obtuse leaves, the racemose, erect inflorescence, non-resupinate flowers with a more or less entire lip. The species is recognized by the concolor, pale green, non-resupinate flowers, the sepals about 14.5-15.5 mm long, and the reniform, entire lip. *Epidendrum jimburense* Hágsater & Dodson also has an entire, reniform lip, but the flowers are larger, and the petals elliptic-oblanceolate. *Epidendrum torquatum* Lindl., has inflorescence arching-nutant, the petals obtrullate and the lip deeply 3-lobed, with the lateral lobes widely dolabriform, and the midlobe obcuneate. *Epidendrum adamsii* Hágsater & Dodson has flowers about the same size, but the lip is clearly 3-lobed, and the oblanceolate-spathulate petals. *Epidendrum panduratum* Hágsater & Dodson has a shallowly 3-lobed, pandurate lip, which is longer than broad, and obcuneate petals.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek κιτρινος- lemon-yellow, χλωρος- yellow-green, in reference to the color of the flowers which is an even yellow-green.



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EPIDENDRUM CLEISTOCOLEUM Hágsater & E. Santiago

Plate 726

EPIDENDRUM CLEISTOCOLEUM Hágsater et E. Santiago, *sp. nov.*

Type: COLOMBIA: Antioquia, [possibly Pueblo Rico, 2100 m], hort. Colomborquídeas, col. ***Rodrigo Escobar; E. Hágsater 11699.*** Holotype: HUA! (Illustration voucher).

Epidendro cottonifloro (Rchb.f.) Hágsater simile sed planta minor, floribus 5-9 majoribus, sepalis ovatis, labello latiore, ad columnae basem cum alis binis prominentibus et rotundatis connato, columnae superficie ventrali profundam cavitatem cum fissura angusta ferenti, columna ad basem leviter arcuata recedit.

Hierba epífita, erecta, hasta 20 cm de alto. **Raíces** basales, delgadas, carnosas, blancas, 1-1.7 mm de grosor. **Tallos** originándose de los entrenudos apicales del tallo anterior, tipo caña, teretes, delgados, rectos a ligeramente sinuosos, color verde rojizo, 3-20 x 0.12-0.26 cm. **Hojas** 8-12, distribuidas a lo largo del tallo, las basales caedizas con el tiempo; 4-5 persistentes hacia el ápice del tallo, articuladas, dísticas; vaina tubular, finamente estriada, 7-15 x 1.2-2.6 mm; lámina linear lanceolada, ápice redondeado, diminutamente bilobado, con una quilla dorsal diminuta, color verde claro con rayas rojas, margen entero, 1.6-5 x 0.4-0.5[0.7] cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueada nutante, florece una sola vez, 1.5-3 cm de largo; pedúnculo corto, terete, delgado, 3-7 mm de largo. **Brácteas florales** más cortas que el ovario, triangulares, acuminadas, 3-4.6 mm de largo. **Ovario** terete, no inflado, no ornamentado, 10-14 mm de largo. **Flores** 5-9, simultáneas, resupinadas, sépalos pardo verdosos con puntos rojos, pétalos rojizos, labelo rojo oscuro a púrpura con nervaduras teñidas de rojizo. **Sépalos** inflexos, libres, ovados, agudos, 3-nervados, margen entero, lisos, 9-12 x 4-6.2 mm; los **laterales** oblicuos. **Pétalos** inflexos, libres, linear lanceolados, subagudos, 1-nervados, con un par de nervaduras laterales muy cortas e inconspicuas, dando la apariencia de ser 3-nervados, margen ligeramente eroso, 8-10.7 x 1.7-2 mm. **Labelo** libre, entero, anchamente obovado orbicular, ápice 4-lobado, los lóbulos redondeados, el par externo más corto que el par interno, base cuneada, margen dentado, 10-15 x 12-14 mm; ecalloso, provisto con 5 quillas centrales prominentes y múltiples venas laterales engrosadas bifurcadas en el ápice, distribuidas en toda la superficie del labelo. **Columna** libre, arqueada en la base, 7 mm de largo, con un par de alas redondeadas y prominentes hacia la base, la superficie ventral con una cavidad a la cual se accesa por una hendidura alargada y angosta. **Clinandrio** reducido, entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** muy pequeños, de ¼ del largo de la cavidad. **Antera** no vista. **Polinios** 4, obovoides, subiguales; caudículas suaves y granulosas, cortas. **Nectario** semicircular, en forma de ranura profunda, formando una cavidad angosta y profunda en la base de la columna, sin traspasar el perianto, no ornamentado. **Cápsula** elipsoide, 29 x 4.6 mm, pedicelo 3 mm de largo, cuello apical 9 mm de largo.

Epiphytic, erect, **herb. Roots** basal, thin, fleshy. **Stems** branching near the apex, cane-like, terete. **Leaves** distributed throughout the stems, narrowly lanceolate, apex minutely bilobed, dorsally keeled, margin entire, somewhat revolute. **Inflorescence** apical, from the main stem and branches, racemose, arching, nutant. **Floral bracts** shorter than the ovary, triangular, acuminate. **Ovary** terete, thin. **Flowers** 5-9, simultaneous, resupinate, sepals greenish brown with red dots, petals reddish, lip dark red to purple, with the veins tinged red. **Sepals** spreading, free, ovoid, acute, 3-veined. **Petals** spreading, linear-lanceolate, subacute, 1-veined, with a pair of small, inconspicuous lateral veins, margin slightly erose. **Lip** free, entire, widely obovate, orbicular, apically 4-lobed, the lobes rounded, the central pair slightly longer than the lateral pair, base cuneate, margin dentate, ecallose, with 5 prominent central keels and multiple lateral veins, these bifurcate towards the apex, and covering the whole disc. **Column** free, slightly arched at the base, with a pair of prominent rounded lateral lobes widened towards the base and joined to the lip; the ventral surface with a cavity accessed through a long narrow slit. **Clinandrium hood** reduced, entire. **Rostellum** apical, slit. **Nectary** semicircular, forming a deep slit, without penetrating the ovary, forming a narrow cavity at the base of the column.

OTHER SPECIMENS: COLOMBIA: **Antioquia**: Cañasgordas, 2120 m, 2 V 1983, *Luer 8914,* SEL! El Plateado, 2060 m, 5 V 1983, *Luer 9046,* SEL! Támesis, 2100 m, 9 XI 1989, *Fonnegra 3194,* SEL! U! Pueblo Rico, 2100 m, 1 V 1997, Colomborquídeas, *Hágsater 11660,* AMO! El Retiro, 2400 m, X 1969, *Ortíz V. 296,* HPUJ. **Risaralda:** San Clemente, 2030 m, 20 IV 1982, *Luer 7460,* SEL! **Valle del Cauca:** Morro Pelado, 2270-2320 m, 17 X 1944, *Cuatrecasas 18160,* AMES!

OTHER RECORDS: COLOMBIA: Without locality, *McCullough 1569,* flower card, AMO! **Antioquia:** Colomborquídeas, 15 XI 1988, *Múnera y Escobar 333,* (color slide) AMO! published as *Colomborquídeas s.n.,* **Orquídeas Nativas de Colombia** 2: 170. 1991. San Antonio de Prado, *G. Escobar 218,* photo,**Orquideología** 5(3): 186. 1970. El Retiro, Vereda Pantanillo, 2400 m, X 1969, *Ortíz V. 296,* illustration, HPUJ! xerox AMO! **Valle del Cauca/Chocó:** without locality, *Duque 110,* photo, AMO! ibid. *Duque 1294,* photo, AMO!

DISTRIBUTION AND ECOLOGY: Known only from western Colombia, around Medellín, and further south west of Cali; from both the Cordillera Occidental, and the Cordillera Oriental; at about 2000-2700 m altitude. Flowering from October to May.

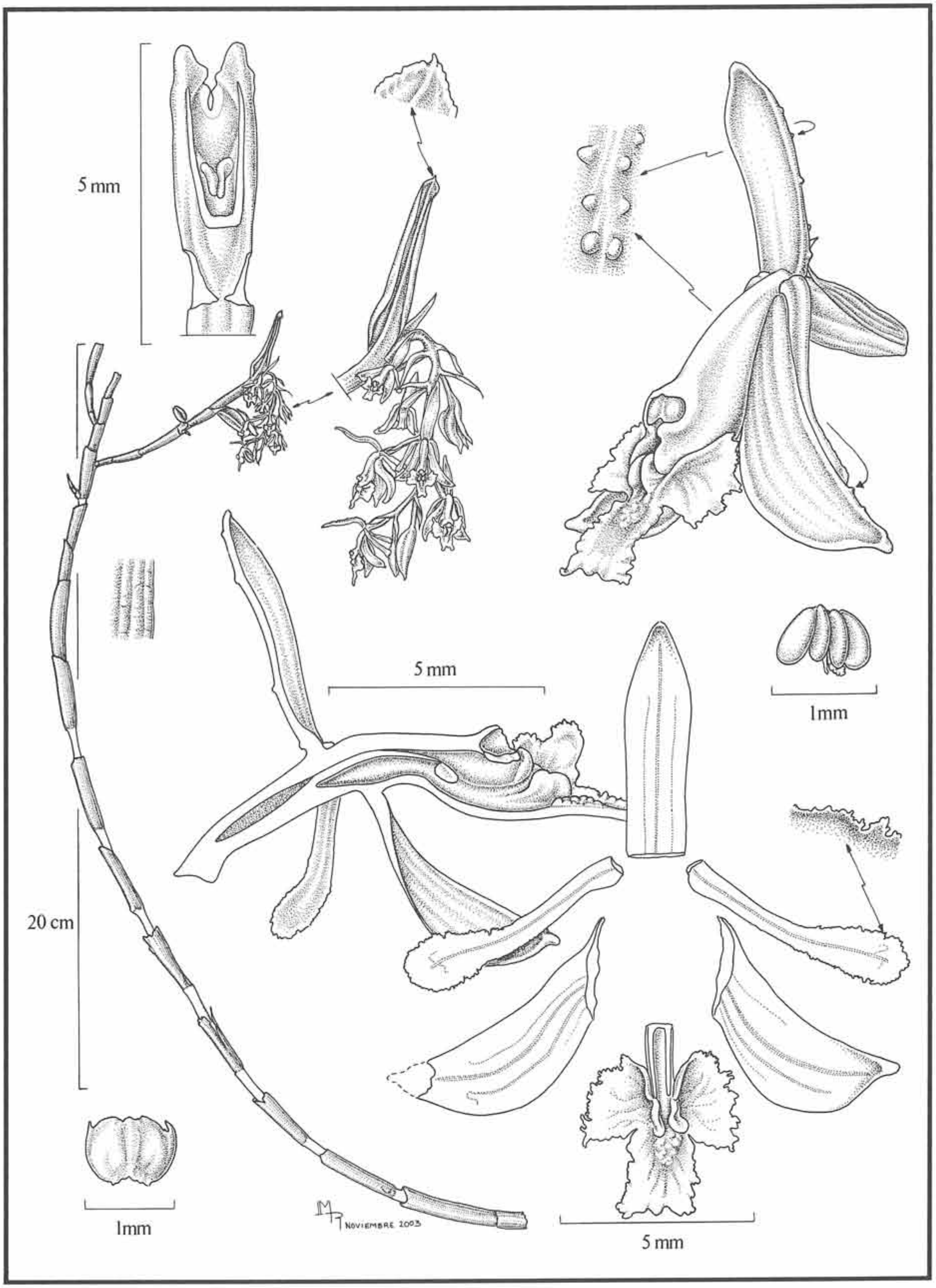
RECOGNITION: *Epidendrum cleistocoleum* belongs to the Diothonea Group and Subgroup which is characterized by the branching habit, linear-lanceolate to lanceolate, apically bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally to obliquely to free. The species has small plants, a short, few-flowered inflorescence, lip is 12-14 mm wide, entire, widely obovate, orbicular, apically 4-lobed, the lobes rounded, the central pair slightly longer than the lateral pair, base cuneate, 5 prominent keels, column nearly free, with the basal wings rounded, the apex of the column rounded, without acute teeth, and a cavity in the lower half of the column, to which there is access by a narrow slit. It closely resembles *Epidendrum cottoniiflorum* which has taller plants, the inflorescence has 12-14 flowers which are smaller, the sepals narrowly elliptic, the lip is 8-10 mm wide, narrowly cuneate at the base and united up to half the column; the base of the column is strongly arched in the bottom half forming a prominent dorsal hump, the ventral side is straight, not forming large, rounded lobes. *Epidendrum gastrochilum* Kraenzlin has the column upturned at the apex, and joined throughout to the lip, it also has a short narrow slit giving access to the cavity at the base of the column, and the lip is entire, orbicular. *Epidendrum arevaloides* Hágsater & Dodson has wider narrowly ovate petals, 2.4-3.0 mm wide, the lip ovate to suborbicular with the surface strongly ornamented with ancistrous trichomes, the column is thin, straight and free.



CONSERVATION STATUS: DD. Data deficient. Apparently widely distributed in the highlands of Antioquia.

ETYMOLOGY: From the Greek κλειστος- closed, shut, and κολεος- vagina, sheath, in reference to the cavity in the lower part of the column, which is accessed by a long narrow slit along the ventral side of the column. This feature is visible in only one other species, *Epidendrum gastrochilum* Kraenzlin, though much reduced.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM COLLICULOSUM Hágsater & E. Santiago **Plate 727**

EPIDENDRUM COLLICULOSUM Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Nariño: Crater lake on the east slope of Vulcan Galeras, ca. 3200 m, 21 January 1979, ***Carlyle & Jane Luer 3746.*** Holotype: SEL! (Illustration voucher).

Epidendro tenuicauli Lindl. simile sed sepalis dorsaliter tuberculatis, petalis descendentibus, labello massam amorpham calliculosam inter et antice callos ferenti, labelli marginibus, praeseretim lobi medii, valde eroso-fimbriatis, differens.

Hierba epífita, ramificada, de más de 30 cm de alto. **Raíces** no vistas. **Tallos** ramificados, tipo caña, teretes, delgados, erectos; el principal largo, de más de 30 x 0.17-0.20 cm, las ramificaciones se producen de los internodos apicales del tallo, aparentemente más cortas, 5.5 x 0.17 cm. **Hojas** en el tallo principal no vistas, 4 en las ramificaciones, distribuidas hacia la mitad apical de los tallos; vainas tubulares (ligeramente infladas cuando secas, sin llegar a ser infundibuliformes), estriadas, rugosas, 1.2-2.0 x 1.9-3.6 mm; lámina angostamente lanceolada, ápice agudo, margen entero, ligeramente revoluto cuando seco, con una quilla dorsal, 1.5-2.5 x 0.4-0.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada, nutante, densiflora, 2.3 cm de largo, pedúnculo corto, terete, delgado, desprovisto de brácteas, 3 mm de largo; raquis terete, delgado, 2.0 mm de largo. **Flores** 10, resupinadas, simultáneas, de color blanco con difuminaciones púrpuras; sin datos de fragancia. **Brácteas florales** tan largas como el ovario, angostamente lanceoladas, largamente acuminadas, gradualmente más cortas, 3-6 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 5-6 mm de largo. **Sépalos** subagudos, 3-nervados, margen entero, dorsalmente tuberculados, 5.6-5.8 x 2-2.2 mm; el **dorsal** extendido, libre, oblongo oblanceolado; los **laterales** descendentes, fusionados de manera oblicua a la parte basal de la columna, oblongos, falcados, aristados. **Pétalos** descendentes, libres, linear oblanceolados, redondeados, 1-nervados, margen apical fuertemente eroso dentado, 5.6 x 1.3 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, margen fuertemente eroso fimbriado, 4.2 x 4.2 mm; bicalloso, los callos gruesos, alargados hasta la base del lóbulo medio, con una masa amorfa y coliculosa entre y frente a los callos; lóbulos subiguales, lóbulos laterales dolabriformes, 1.7 x 2.7 mm; lóbulo medio rectangular, truncado, diminutamente apiculado, 2.1 x 1.8 mm. **Columna** ligeramente arqueada, obcónica en el ápice, 5 mm de largo. **Clinandrio** corto, márgenes laterales crenulados. **Antera** reniforme, con una quilla roma y baja en la parte media, 4 locular. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de ¼ del largo de la cavidad estigmática. **Nectario** penetrando a la altura del sépalo dorsal, liso. **Cápsula** no vista.

Epiphytic, branching **herb. Stems** branching, cane-like, terete, thin, erect; the main stem long, the branches from the apical internodes, apparently shorter. **Leaves** 4 on the branches, distributed along the apical half; sheaths tubular (slightly inflated when dry, but not infundibuliform), striated, rugose; blade narrowly lanceolate, apex acute, margin entire, slightly revolute when dry, with a dorsal keel. **Inflorescence** apical, racemose, arching, nutant, dense-flowered, peduncle short, terete, thin; rachis terete, thin. **Flowers** 10, resupinate, simultaneous, white, tinged with purple. **Floral bracts** as long as the ovary, narrowly lanceolate, long-acuminate, progressively shorter. **Sepals** 3-veined, subacute, margin entire, dorsally tuberculate; the **dorsal** spreading, free, oblong-oblanceolate; the **laterals** descending, obliquely fused with the basal part of the column, oblong, falcate, aristate. **Petals** descending, free, linear-oblanceolate, rounded, 1-veined, apical margin strongly erose-dentate. **Lip** united to the column, 3-lobed, the lobes subequal, base deeply cordate, margin strongly erose-fimbriate; bicallose, the calli thick, elongate, reaching the base of the midlobe, with an amorphous, colliculose mass in front of and between the calli; lateral lobes dolabriform; midlobe rectangular, truncate, minutely apiculate. **Column** slightly arched, apex obconical. **Clinandrium hood** short, lateral margins crenulate. **Anther** reniform, with a low, rounded keel, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** subapical, slit. **Nectary** penetrating as far as the base of the dorsal sepal, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, on the Volcán Galeras in southern Colombia, at about 3200 m altitude. Flowering in January.

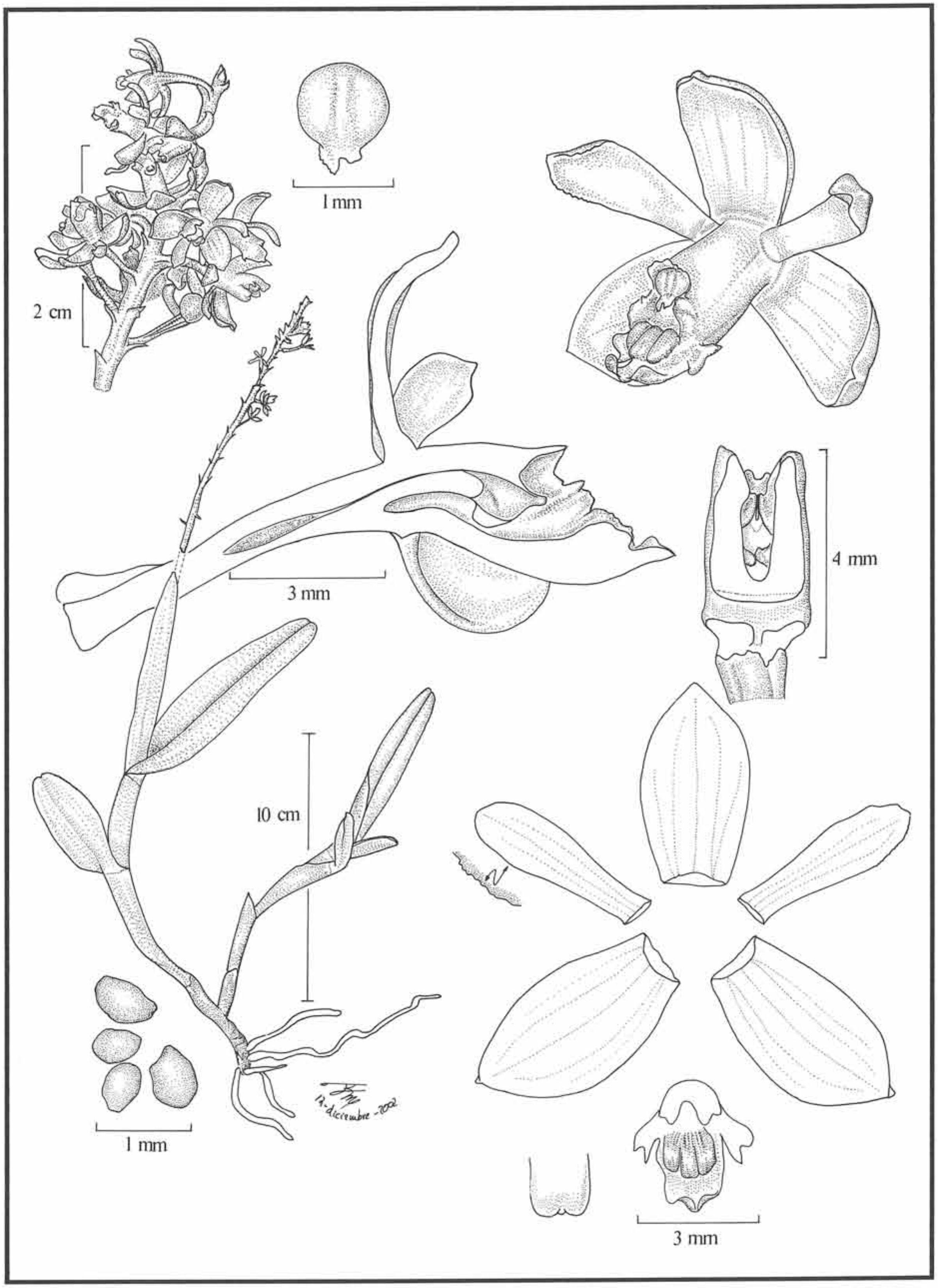
RECOGNITION: *Epidendrum colliculosum* belongs to the Scabrum Group, Cuniculatum Subgroup, which is characterized by the monopodial, branching habit, adpressed leaf-sheaths, acute leaves, and 3-lobed lip. The species is recognized by the bushy, branching, short plants, narrow leaves, mostly less than 5 mm wide (at least on the branches), the arching small inflorescence with simultaneous flowers, white with a purple tinge, the lateral lobes of the lip well developed, dolabriform, an amorphous, colliculose mass in front of and between the calli, the whole margin of the lip strongly erose-fimbriate and a short nectary. It is very similar to *Epidendrum tenuicaule* which has greenish yellow flowers, glabrous sepals and the midlobe of the lip has an entire margin and three low keels in front the callus. *Epidendrum cuniculatum* Schltr. has a deeper nectary, penetrating more than half the ovary, a larger, funnel-shaped clinandrium with the margin sinuous, and very short, reniform, lateral lobes of the lip, with a sinuous margin. It grows in the same region as *Epidendrum angustissimum* Lindl. (syn. *Epidendrum chortophyllum* Schltr.) which forms a more open bush, and has linear-lanceolate, acuminate leaves to 3.5 mm wide, the rachis of the inflorescence longer, to 5.3 cm long and the lateral lobes of the lip semi-orbicular.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *colliculosus*, covered with little rounded or hillock-like elevations.



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EPIDENDRUM CONDORENSE Hágsater & Dodson

Plate 728

EPIDENDRUM CONDORENSE Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Zamora-Chinchipe: Road from Chuchumbleza to Tundeimi in the Cordillera del Condor, 1450-1650 m, 21 May 1988, ***Alex Hirtz 3834***. Holotype: RPSC! (Illustration voucher).

Epidendro brachyglosso Lindl. simile sed planta minor, caulibus bifoliatis, foliis in caulis dimidio natis, labello tricalloso lobulis lateralibus oblique subquadratis, apice bilobato, lobulo interiore acuto, lobulo exteriore irregulari rotundato, lobulo medio subquadrato, anthera subsphaerica recedens.

Hierba simpodial, rastrera, epífita, 21 cm de alto. **Raíces** 1-2 de la base de cada tallo, gruesas, carnosas, 2-3 mm de grosor. **Tallos** producidos de los nudos inferiores del tallo anterior, a 1-1.5 cm arriba de la base; erectos, rectos, lateralmente comprimidos, 8-11 x 0.25-0.45 cm. **Hojas** 2 por tallo, distribuidas en la mitad apical del tallo, vainas no foliosas, escariosas, iguales a las foliares, estriadas y finamente rugosas en seco 30-33 x 3-6 mm; lámina elíptico lanceolada, ápice obtuso, aristado, generalmente rajándose al extenderse, margen entero, 50-80 x 10-20 mm. **Bráctea espatácea** 1, ancipitosa, oblonga, aguda, 78 x 16 mm. **Inflorescencia** apical, racemosa, tipo alargada, densa, ca. 15 cm de largo; el pedúnculo cubierto entre 3/4 ó más por la espata, el raquis recto, 10 cm de largo. **Flores** 30, simultáneas, no resupinadas, sépalos pardos, pétalos y labelo verdes; fragancia no registrada. **Brácteas florales** más cortas que el ovario, triangulares, agudas, 1-3.5 mm de largo, reduciéndose en tamaño hacia el ápice. **Ovario** corto, inflado hacia el ápice, 6-7 mm de largo. **Sépalos** extendidos, elípticos, agudos, 5-nervados, margen entero, 5.0-5.1 x 2.7-2.8 mm; los **laterales** con una quilla dorsal apical. **Pétalos** extendidos, oblancelados oblongos, obtusos, 3-nervados, margen eroso ondulado, 4.9-5.0 x 1.3-1.4 mm. **Labelo** trilobado, cordado, 3.3-3.4 x 3.0-3.1 mm; tricalloso, los callos prominentes, ocupando la mitad del lóbulo medio; lóbulos laterales reducidos, oblicuamente subcuadrados, el ápice bilobado, el lobo interior agudo, el exterior irregular, redondeado; el lóbulo medio subcuadrado, mucronado. **Columna** recta, corta, gruesa, dilatada hacia el ápice, 4.0-4.2 mm de largo. **Clinandrio** sobrepasando ligeramente la columna, entero, carnoso. **Antera** subesférica. **Polinios** 4, obovoides, lateralmente comprimidos.**Lóbulos laterales del estigma** prominentes, de 1/2 de la cavidad estigmática. **Nectario** delgado, fondo redondeado, penetrando ligeramente al ovario, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, repent **herb. Roots** at the base of each stem, thick, fleshy. **Stems** erect, straight, laterally compressed. **Leaves** 2, distributed along the upper half of the stem, covered at the base by three, non-foliaceous, scarious sheaths, similar to the leaf-sheaths, striated and minutely rugose when dry; blade lanceolate-elliptic, apex obtuse, aristate, margin entire. **Spathaceous bract** 1, ancipitose, oblong, acute. **Inflorescence** apical, racemose, elongate, densely-flowered; peduncle covered over 3/4 its length by the spathe, rachis straight. **Flowers** 30, simultaneous, non-resupinate, sepals brown, petals and lip green. **Floral bracts** shorter than the ovary, triangular, acute, progressively shorter. **Ovary** short, inflated towards the apex. **Sepals** spreading, elliptic, acute, the laterals with a dorsal, apical keel, margin entire, 5-veined. **Petals** spreading, oblanceolate oblong, obtuse, margin erose, undulate, 3-veined. **Lip** 3-lobed, cordate; 3-callose, the calli prominent, occupying half the midlobe; lateral lobes reduced, obliquely subquadrate, the apex bilobed, the interior lobe acute the outer lobe irregular-rounded; midlobe subquadrate, mucronate. **Column** straight, short, thick, dilated towards the apex. **Clinandrium hood** somewhat surpassing the body of the column, entire, fleshy. **Anther** subspherical. **Pollinia** 4, obovoid, laterally compressed. **Nectary** thin, rounded, slightly penetrating the ovary, unornamented.

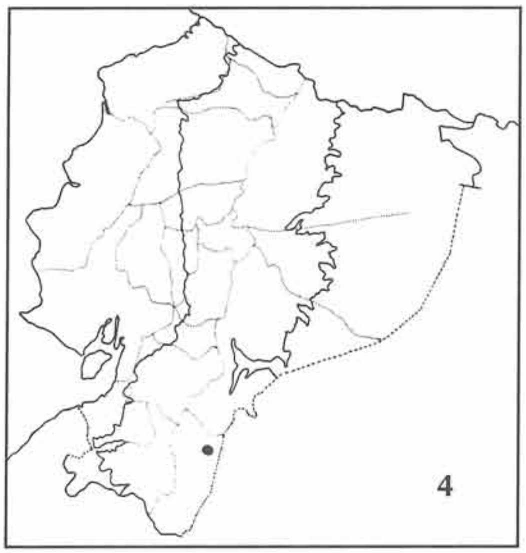
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Endemic from Ecuador. Epiphyte, at about 1450 to 1650 m altitude. Flowering in May.

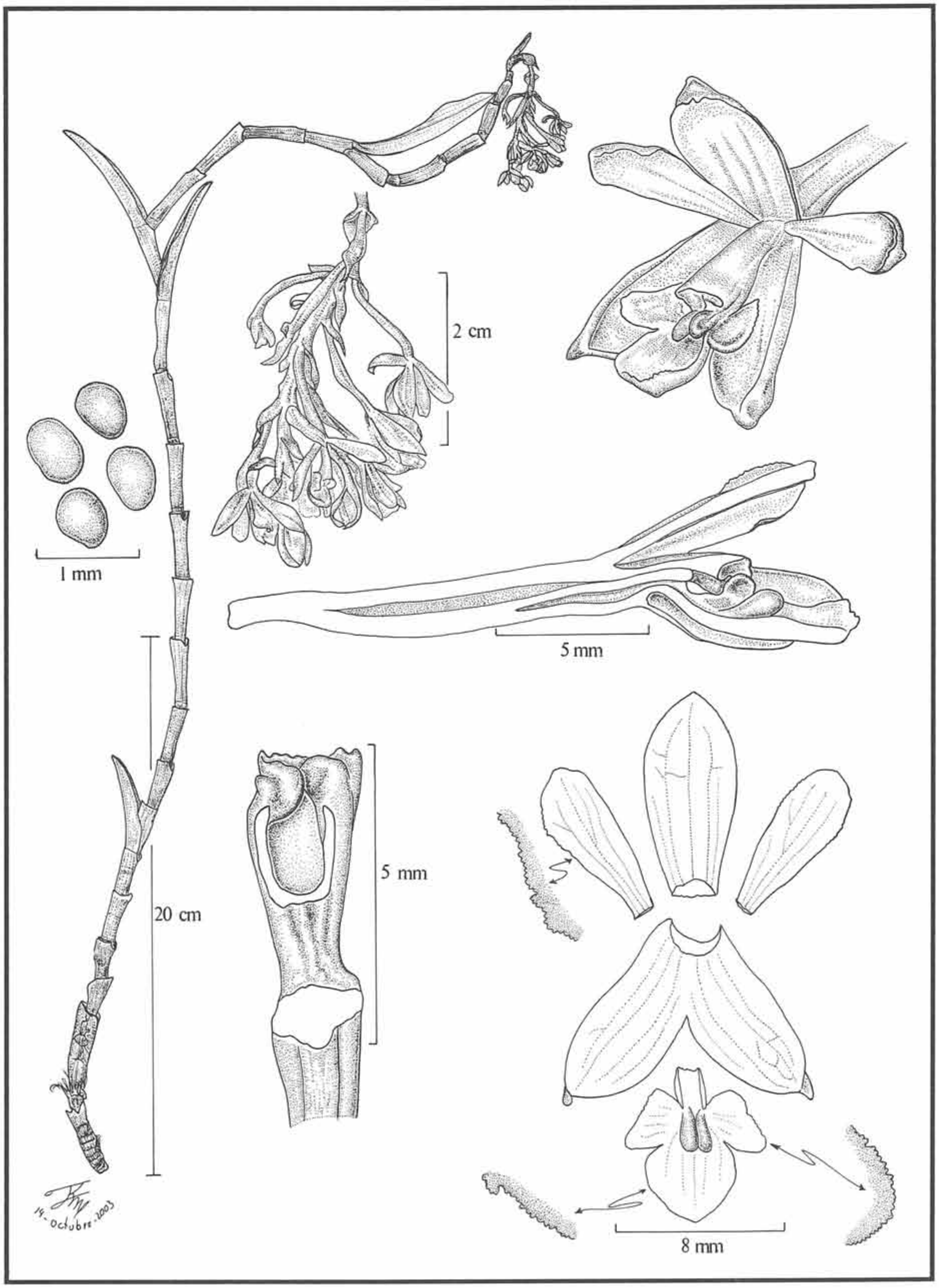
RECOGNITION: *Epidendrum condorense* belongs to the Mancum Group, Mancum Subgroup and can be recognized by its laterally compressed stems, with two leaves, oblanceolate petals with an erose, undulate margin, tricallose lip with lateral lobes reduced, obliquely subquadrate, the apex bilobed, the interior lobe acute, the outer lobe irregular-rounded, midlobe subquadrate, and a subspherical anther. Similar to *Epidendrum brachyglossum* which has taller plants, 2-3 leaves, linear petals with an entire margin, bicallose lip, suborbicular, entire lateral lobes, reduced, a rectangular midlobe and a reniform anther.

CONSERVATION STATUS: DD: Data deficient.

ETIMOLOGY: In reference to the Cordillera del Condor, where the species was collected.



Author: L. Sánchez S. **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM CONNATUM Hágsater & E. Santiago

Plate 729

EPIDENDRUM CONNATUM Hágsater et E. Santiago, *sp. nov.*

Type: PERU: without locality, ***Mathews s.n.*** Holotype: S! (Illustration voucher).

Epidendro zipaquirano Schltr. simile sed sepalis lateralibus ad basem connatis, petalis ad apicem rotundatis discrepans.

Hierba terrestre, de 55 cm de alto. **Raíces** no vistas. **Tallos** probablemente ramificados hacia la zona apical, tipo caña, teretes, 50 x 0.48 cm. **Hojas** numerosas, distribuidas a lo largo de los tallos, alternas, suberectas, caedizas; vainas infundibuliformes, estriadas, rugosas, fibrosas con el tiempo, 9-28 x 3.2-6.2 cm; lámina oblongo lanceolada, ápice agudo, margen entero, coriácea, conduplicada en la base, 3.3-5.4 x 1.0-1.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, nutante, 5.5 cm de largo; pedúnculo muy corto, terete, 1.8 mm de largo; provisto de dos brácteas en la parte media apical, ovadas, acuminadas, abrazadoras, 7 mm de largo. **Brácteas florales** más cortas que el ovario, angostamente triangulares, acuminadas, abrazadoras, 4-6 mm de largo. **Ovario** terete, delgado, liso, no inflado, 11-12 mm de largo. **Flores** 17, simultáneas, resupinadas, sin datos de color ni fragancia. **Sépalos** entreabiertos, angostamente obovados, redondeados, carnosos, margen entero, 9.6-10 x 4.1-4.3 mm; el **dorsal** libre, 5-nervado, las nervaduras laterales cortas; los **laterales** connados en la base, con una quilla dorsal prominente y erosa, 4-nervados. **Pétalos** entreabiertos, libres, oblanceolados, redondeados, 3-nervados, margen eroso hacia la mitad apical, 8 x 3 mm. **Labelo** unido a la columna, trilobado, cordado en la base, margen eroso dentado, 6.3 x 6.7 mm; bicalloso, los callos delgados, alargados hasta la base del lóbulo medio; desprovisto de quillas; lóbulos laterales dolabriformes, oblícuos, 2.4 x 3.3 mm; lóbulo medio ovado, 3.3 x 4.3 mm. **Columna** recta, delgada, con un par de lóbulos carnosos en el ápice, 5 mm de largo. **Clinandrio** prominente, margen crenulado. **Antera** no vista. **Polinios** 4, ovoides, lateralmente comprimidos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/2 del largo de la cavidad estigmática. **Nectario** penetrando 1/4 del ovario, delgado, no inflado, no ornamentado. **Cápsula** no vista.

Terrestrial **herb. Stem** simple, cane-like, probably branching above with time, terete. **Leaves** numerous, distributed throughout the stems, the lower ones lacking at time of flowering, sheaths infundibuliform, striated, rugose; blade suberect, oblong-lanceolate, apex acute, margin entire, coriaceous, conduplicate at the base. **Inflorescence** apical, racemose, nutant, peduncle very short, terete, provided with two bracts below the rachis, ovate, acuminate, amplexicaule. **Floral bracts** shorter than the ovary, narrowly triangular, acuminate, amplexicaule. **Ovary** terete, thin, smooth. **Flowers** 17, simultaneous, resupinate. **Sepals** partly spreading, narrowly obovate, rounded, fleshy, margin entire; the **dorsal** sepal free, 5-veined, the lateral veins short, the **laterals** connate at the base, with a prominent dorsal, erose keel, 4-veined. **Petals** partly spreading, free, oblanceolate, rounded, 3-veined, apical margin erose. **Lip** united to the column, 3-lobed, cordate at the base, margin erose-dentate; bicallose, the calli thin, elongate, reaching the base of the midlobe, without keels; lateral lobes obliquely dolabriform, midlobe ovate. **Column** straight, thin, with a pair of fleshy lobes at the apex. **Clinandrium hood** prominent, margin crenulate. **Pollinia** 4, ovoid, laterally flattened. **Rostellum** apical, slit. **Lateral lobes of the stigmatic cavity** ½ the length of the cavity. **Nectary** penetrating 1/4th of the ovary, thin, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, probably from the eastern slopes of the Andes in northern Peru, around Chachapoyas.

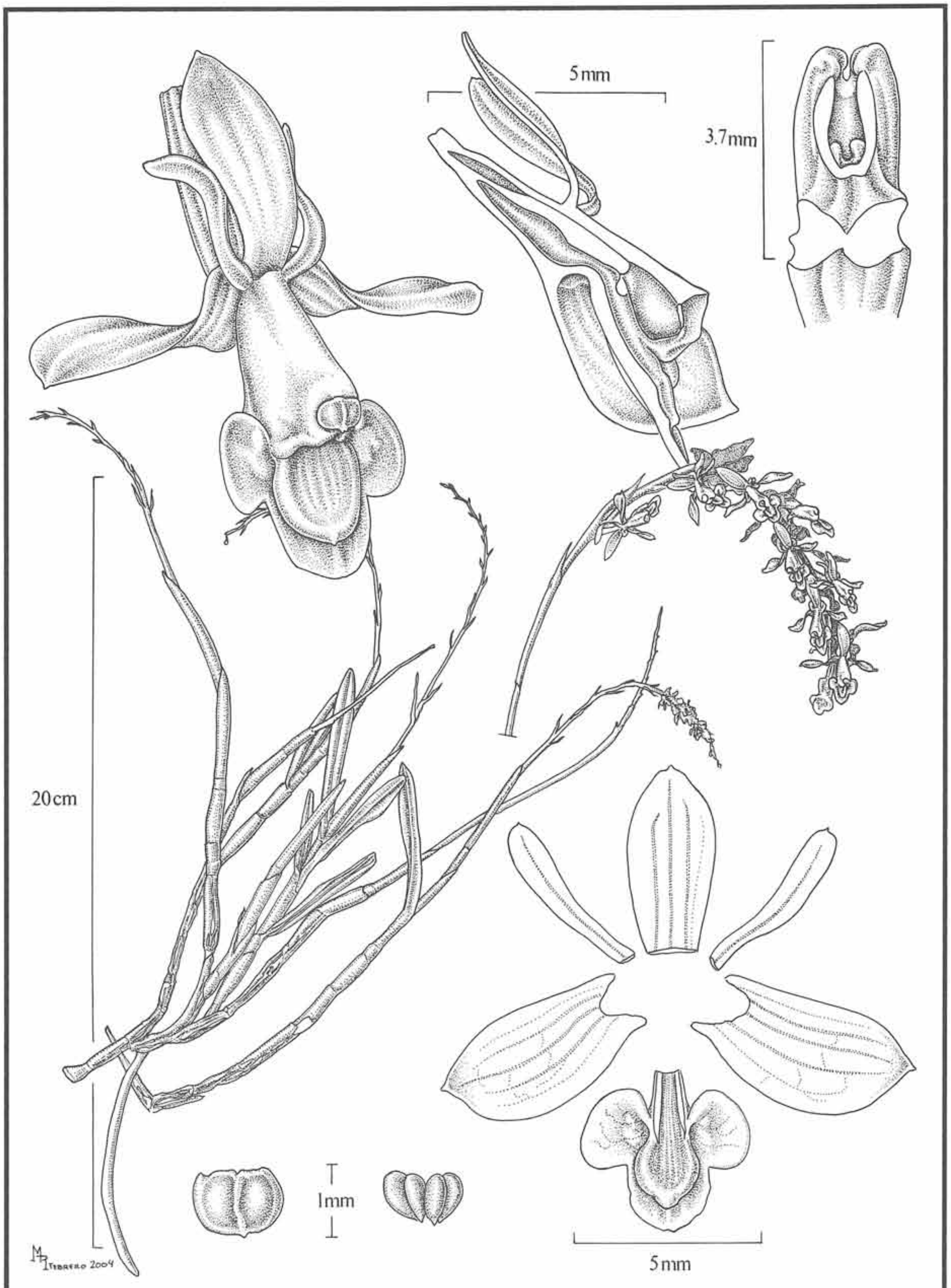
RECOGNITION: *Epidendrum connatum* belongs to the Scabrum Group, Soratae Subgroup which is characterized by the branching habit starting on a monopodial primary stem, infundibuliform, rugose leaf-sheaths, lanceolate, aristate, acute leaves, racemose subcapitate inflorescence on a short, thin peduncle, and the bicallose lip. The species is recognized by the wide petals, partly fused lateral sepals, rounded petals, obliquely dolabriform lateral lobes of the lip and ovate midlobe. *Epidendrum zipaquiranum* has free, elliptic sepals, subacute petals with the margin irregularly papillose. *Epidendrum angustissimum* Lindl. (syn. *Epidendrum chortophyllum* Schltr.) has very narrow, linear-lanceolate leaves, the new stem produced from an upper internode of the previous stem, and the lobes of the lip about equal in size and margins erose. *Epidendrum bolivianum* Schltr. has slightly larger flowers, sepals 13 mm long, leaves, 7-12 mm wide, the midlobe of the lip cuneate truncate at the apex. *Epidendrum soratae* Rchb. f. has a reniform lip, apically somewhat 3-lobed, bicallose, and 6-7 mm long sepals.

CONSERVATION STATUS: DD. Data deficient.



ETYMOLOGY: From the Latin *connatus*, born together, fused, in reference to the lateral sepals which are basally connate.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM CYCLOTYLOSUM Hágsater **Plate 730**

EPIDENDRUM CYCLOTYLOSUM Hágsater, *sp. nov.*

Type: PERU: Amazonas: Taulia, 2500 m, 12 X 1954, ***Werner Rauh & G. Hirsch P2170.*** Holotype: AMES! (Illustration voucher). Xerox AMO!

Epidendro rhodoide Hágsater & Dodson simile sed minus, sepalis latioribus rotundatis, petalis angustioribus 1-nervatis, labelli margine integra, callo suborbiculari labelli magnam partem occupanti differt.

Hierba epífita, cespitosa, de 15-30 cm de alto. **Raíces** basales, delgadas, carnosas, escasas, 2-3 mm de grosor. **Tallos** tipo caña, originándose de los entrenudos basales del tallo anterior, delgados, lateralmente comprimidos, erectos, 5-8 x 0.26-0.5 cm. **Hojas** 2-5, articuladas, distribuidas en la mitad apical del tallo; vainas tubulares, finamente estriadas y ligeramente rugosas, las inferiores fibrosas con el tiempo, 3-23 mm de largo; lámina oblongo elíptica, ápice redondeado, con una quilla dorsal baja, margen entero, 2.2-8.4 x 0.4-0.8 cm. **Brácteas espatáceas** 2, ancipitosas, tubulares, agudas, 29-33 x 1.8-3.7 mm. **Inflorescencia** apical, racemosa, arqueada, densiflora, 10-20 cm de largo; pedúnculo elongado, ancipitoso, delgado recto, cubierto casi en su totalidad por las bracteas espatáceas, 4-8 cm de largo. **Brácteas florales** más largas que el ovario a más cortas, las apicales gradualmente más cortas, angostamente triangulares, acuminadas, abrazadoras, 2-6 mm de largo. **Ovario** terete, delgado en la base, progresivamente más grueso, no inflado, liso, 3.5-4 mm de largo. **Flores** 13-20, simultáneas, resupinadas, color pardo rojizo pálido, sin datos de fragancia. **Sépalos** libres, obovados, redondeados, diminutamente apiculados, margen entero, 5-6.3 x 2.5-3 mm; el **dorsal** reflexo, 3-4 nervado; los **laterales** extendidos, 3-5 nervados, oblicuos y algo torcidos en posición natural. **Pétalos** libres, reflexos, linear oblanceolados, redondeados, diminutamente apiculados, 1-nervados, margen entero, 4.8-5.5 x 1-1.2 mm. **Labelo** unido a la columna, trilobado, cordado en la base, margen entero, 3-4 x 3.5-4.7 mm; unicalloso, el callo suborbicular, prominente, carnoso, ligeramente cóncavo y estriado en la base; lóbulos laterales dolabriformes, redondeados, 1.8 x 2.2 mm; lóbulo medio semiorbicular, 1.8 x 2.2 mm. **Columna** recta, gruesa, dilatada hacia el ápice, 4-4.5 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, 4-locular, con una quilla baja al frente, diminutamente apiculada. **Polinios** 4, obovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/5 del largo de la cavidad estigmática. **Nectario** penetrando un poco más de la mitad del ovario, no ornamentado, gradualmente más ancho justo a la altura del perianto. **Cápsula** no vista.

Epiphytic, caespitose **herb. Roots** basal, thin, fleshy, scarce. **Stems** cane-like, produced from a basal internode of the previous stem, thin, laterally compressed, erect. **Leaves** 3-5, articulate, distributed throughout the apical half of the stem; sheaths tubular, minutely striated and slightly rugose, the lower ones fibrous with time; blade oblong-elliptic, apex rounded, with a low, dorsal keel, margin entire. **Spathaceous bracts** 2, ancipitous, tubular, narrow, acute. **Inflorescence** apical, racemose, arching, dense-flowered; peduncle elongate, ancipitous, thin, straight, covered nearly totally by the spathaceous bracts. **Floral bracts** longer to shorter than the ovary, narrowly triangular, acuminate. **Ovary** terete, thin at the base, thickened towards the apex, short, smooth. **Flowers** 13-15, simultaneous, resupinate, pale brown-red. **Sepals** free, obovate, rounded, minutely apiculate, margin entire; the **dorsal** reflexed, 4-veined, the **laterals** spreading, 5-veined, oblique and somewhat twisted in natural position. **Petals** free, reflexed, linear-oblanceolate, rounded, minutely apiculate, 1-veined, margin entire. **Lip** united to the column, 3-lobed, cordate at the base, margin entire; callus a single suborbicular, prominent, fleshy somewhat concave, striated structure; lateral lobes dolabriform, rounded, about as large as the midlobe; midlobe semiorbicular. **Column** straight, thick, dilated towards the apex. **Clinandrium hood** reduced, entire. **Anther** reniform, 4-celled, with a low keel in front, minutely apiculate. **Nectary** penetrating slightly more than half the ovary, smooth, gradually wider towards the perianth.

OTHER SPECIMENS:PERU: Cajamarca: Hualgayoc, Hacienda Taulis, above Palmito, 2700-3000 m, 31 VIII 1964, Hutchinson 6404, AMES! E! F! G! LE! MO! NY! P! San Miguel, Taulis Recorco (Calquis), 2470 m, 3 VII 1986, Mostacero 1185, AAU! F! NY! SEL!

DISTRIBUTION AND ECOLOGY: Known only from the mountains in northeastern Peru, east of Chachapoyas, growing in Podocarpus forest from 2500 to 3000 m altitude. Flowering from July to October.

RECOGNITION: *Epidendrum cyclotylosum* belongs to the Pergracile Group Rhodoides Subgroup characterized by the caespitose habit, racemose inflorescence with narrow, parallel-sided spathaceous bracts, and flowers with a wide, rounded midlobe, and a large fleshy disc. The species is recognized by the small flowers with linear-oblanceolate petals and the lip 3-lobed, the lobes subequal in size, the margin entire, and a large, suborbicular, concave callus which occupies a large part of the surface of the lip, and is striated. *Epidendrum rhodoides* has somewhat larger leaves, larger flowers, sepals 10-11 mm long, wider narrowly obovate, 5-veined petals, the margin of the side lobes of the lip irregular-erose, and the lip with two long, parallel calli with the surface in between striated. Other species in the Pergracile Group such as *Epidendrum sulcatum* Ames, have the midlobe of the lip much longer than broad and two small calli at the base of the lip, sometimes with a short keel in the middle, but the disc of the lip is not thickened.

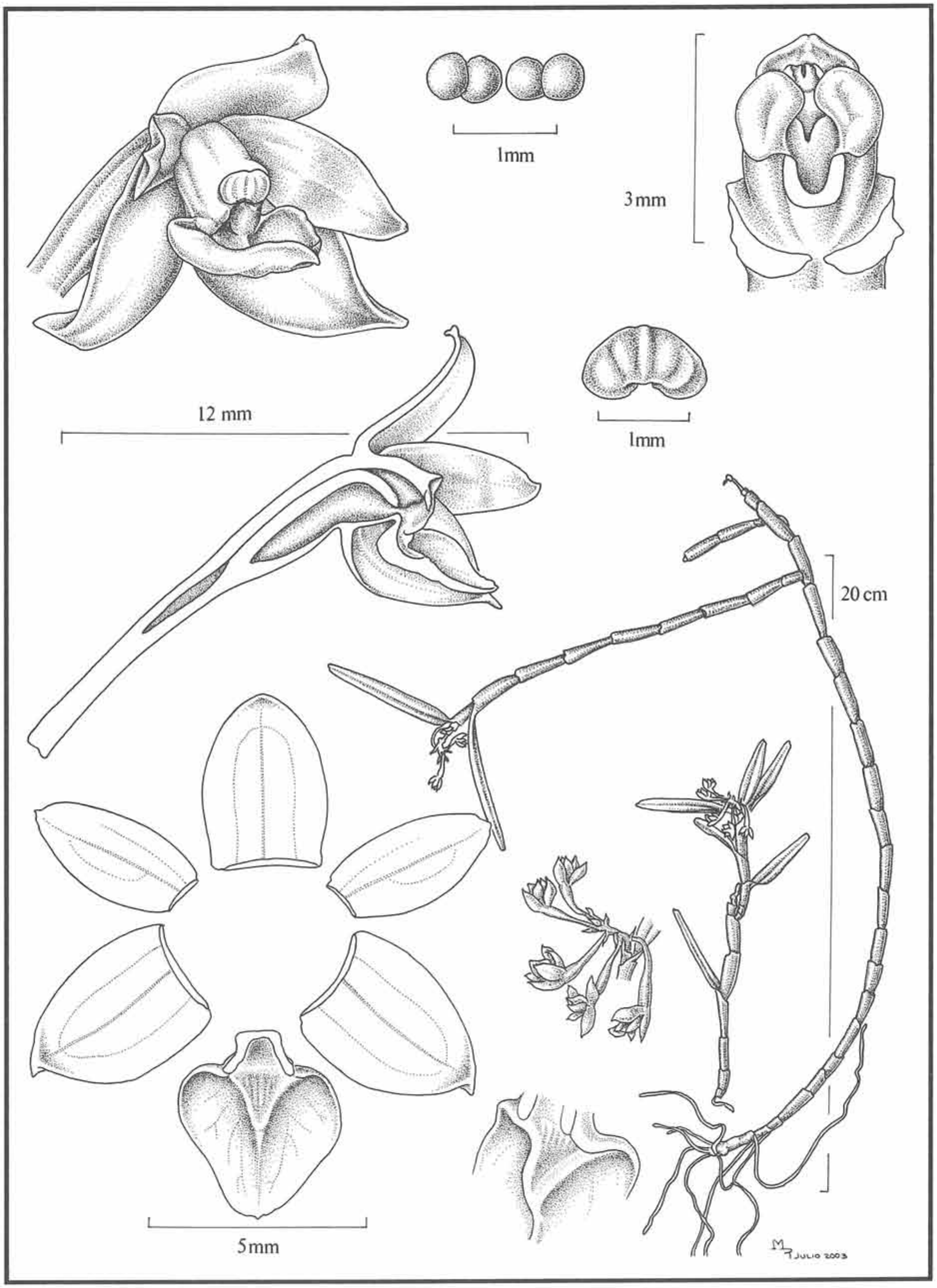


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek κυκλος- circle, and τυλος- callus, in reference to the suborbicular callus which occupies a large part of the surface of the lip.

REFERENCE: Hágsater, E. & C. H. Dodson, 2001. *Epidendrum rhodoides*, Icones Orch. (Mexico City) 4: pl. 480.

Author: E. Hágsater **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM DELTOGASTROPODIUM Hágsater & E. Santiago Plate 731

EPIDENDRUM DELTOGASTROPODIUM Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Cauca: Páramo de Barbillas, southeast of Popayán, 3070 m, 27 July 1978, ***C. & J. Luer, J. Kuhn & R. Escobar 3013.*** Holotype: SEL! (Illustration voucher).

Epidendro gastropodio Rchb.f. simile sed floribus minoribus, labello triangulari-subcordiformi rotundato, labelli basi pulvinum triangularem litterae "V" ad instar ferenti divergens.

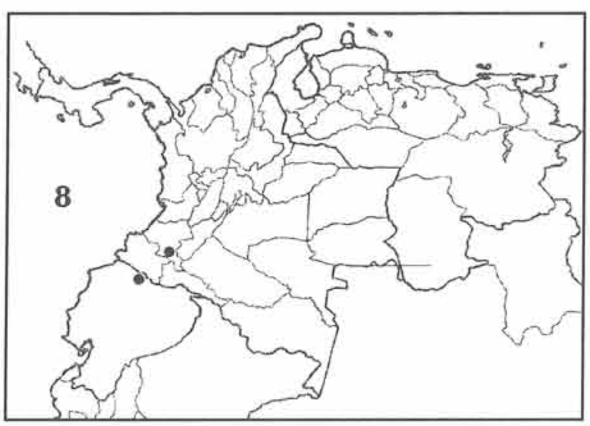
Hierba terrestre, ramificada, de 24-40 cm de alto. **Raíces** basales, raramente muy escasas en algunas ramificaciones, carnosas, delgadas, blancas, 0.5-1.0 mm de grosor. **Tallos** ramificados hacia el ápice, tipo caña, teretes, rectos, delgados; el tallo principal 24 x 0.4 cm; las ramificaciones más cortas, produciéndose de los entrenudos apicales de ramas anteriores, 4.0-12.5 x 0.25-0.35 cm. **Hojas** ca. de 10 en el tallo principal, generalmente no persistentes; 4-8 en las ramificaciones, distribuidas en la parte media apical de los tallos, coriáceas, alternas, generalmente caedizas con el tiempo; vaina tubular, finamente estriada y rugosa, 6-19 x 2.5-3.5 mm; lámina lanceolada, ápice desigualmente bilobado, con una quilla dorsal baja, lisa, margen entero; 2.2-4.3 x 0.3-0.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, corta, racemosa, nutante, densa, multiflora, subsésil, florece una sola vez, 8-10 mm de largo; pedúnculo muy corto, terete, delgado, desprovisto de brácteas, 1.5-2 mm de largo; raquis terete, delgado, 5-7 mm de largo. **Brácteas florales** mucho más cortas que el ovario, angostamente lanceoladas, largamente acuminadas, abrazadoras, 2-3 mm de largo. **Flores** 10-15, simultáneas, resupinadas, color rosado, sin detalles de color de columna ni labelo; sin datos de fragancia. **Ovario** terete, delgado, liso, ligeramente inflado ventralmente en el 1/3 apical, 7-15 mm de largo. **Sépalos** entreabiertos, libres, ovado elípticos, ápice subagudo a agudo, diminutamente apiculado, 3-nervados, margen entero, 3.8-5.6 x 2.6-3.1 mm. **Pétalos** entreabiertos, libres, angostamente elípticos, subagudos, diminutamente apiculados, 2-nervado, margen entero, 4-5.8 x 1.8-2 mm. **Labelo** unido en el ½ basal de la columna, entero, triangular subcordiforme, truncado en la base, los ángulos redondeados, diminutamente apiculado en el ápice, margen entero, 3.4-3.8 x 3.5-3.6 mm; ecalloso; cojín prominente en forma de "V", triangular, cóncavo en la base, estriado; en la base el labelo forma un mentón al estar doblado hacia abajo y hacia atrás antes del ápice de la columna. **Columna** ligeramente arqueada en la base, gruesa, corta; ápice con un par de lóbulos redondeados, gruesos, muy carnosos, 3 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, con una quilla roma central. **Polinios** 4, lenticulares, semejantes entre sí. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando 1/3 del ovario, inflado, liso. **Cápsula** no vista.

Terrestrial, branching **herb. Roots** basal, fleshy, thin. **Stems** branching near the apex, cane-like, terete, straight, thin, the main stem somewhat longer than the branches. **Leaves** ca. 10 on the principal stem, 4-8 on the branches, distributed throughout the apical half, coriaceous; sheaths tubular, minutely striated and rugose; blade lanceolate, apex unequally bilobed, with a low dorsal keel, smooth, margin entire. **Inflorescence** apical, short, racemose, nutant, dense, many-flowered, flowering only once; peduncle, very short, terete, thin; rachis terete, thin. **Floral bracts** much shorter than the ovary, narrowly lanceolate, long-acuminate. **Flowers** 10-15, simultaneous, resupinate, pink colored, without details of the color of column and lip. **Ovary** terete, thin, smooth, inflated ventrally along the apical 1/3rd. **Sepals** partly spreading, free, ovate-elliptic, apex subacute to acute, minutely apiculate, 3-veined, margin entire. **Petals** partly spreading, free, narrowly elliptic, subacute, minutely apiculate, 2-veined, margin entire. **Lip** united to the basal ½ of the column, entire, triangular-subcordiform, the angles rounded, base truncate, minutely apiculate at the apex, margin entire; ecallose; cushion prominent, "V" shaped, triangular, concave at the base, striated; the base of the lip forms a mentum as it is bent down and backwards before the apex of the column. **Column** slightly arched at the base, thick, short, with a pair of rounded, very fleshy lobes at the apex. **Clinandrium hood** short, margin entire. **Anther** reniform, with rounded central keel. **Pollinia** 4, lentil-shaped, similar. **Rostellum** apical, slit. **Nectary** penetrating 1/3rd of the ovary, inflated, smooth.

OTHER SPECIMENS: ECUADOR: Carchi: Tulcán to El Carmelo km 18, 3200 m, 7 VII 1990, *Dodson 18409*, MO! QCNE!

DISTRIBUTION AND ECOLOGY: Apparently scarce between the border of Ecuador and Colombia and along the Cordillera Central into the province of Cauca. Growing as a terrestrial on embankments, 3070-3200 m altitude. Flowering in July.

RECOGNITION: *Epidendrum deltogastropodium* belongs to the Diothonea Group, Gastropodium Subgroup, characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally to obliquely to free, the subgroup has small, usually brightly colored flowers, the column ending in fleshy-thickened, lobes. The new species has small, acute floral segments, the sepals 3.8-5.8 mm long and the triangular-subcordiform lip is truncate at the base and provided with a prominent, "V" shaped, triangular cushion. It is similar to *Epidendrum gastropodium* which has 6-7.5 mm long sepals, and the deeply cordate lip has a transverse cushion ending in three short keels. *Epidendrum eugenii* Schltr. has 5.3-5.7 mm long sepals and the lip has no cushion but three long, parallel, slow keels. *Epidendrum melanogastropodium* Hágsater & Dodson has wide, rounded floral segments, the sepals 5.5-6.5 mm long and the lip provided with a transversely elliptic, massive, truncate cushion. *Epidendrum mesogastropodium* Hágsater & Dodson has acute floral segments, the sepals 5.0-5.6 mm long, and the cordate lip provided with a fleshy, truncate, transversely elliptic cushion.

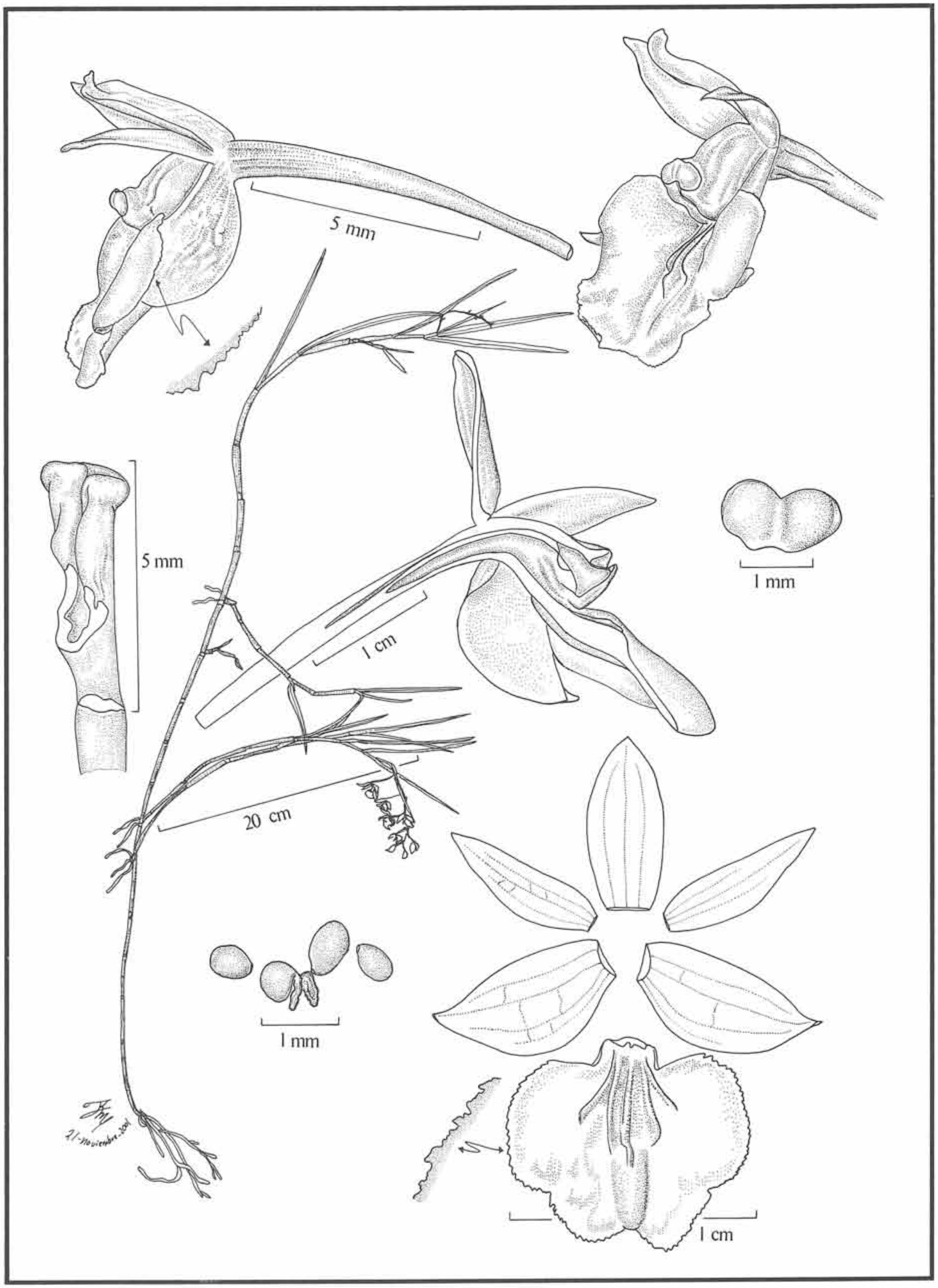


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek δελοειδης- delta-shaped, triangular, γαστηρ- belly, and ποδιον- foot, in reference to the triangular "V" shape at the base of the lip and the Gastropodium Group which share the inflated belly or ovary.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM DODSONII Hágsater & E. Santiago

Plate 732

EPIDENDRUM DODSONII Hágsater et E. Santiago, *sp. nov.*

Type: ECUADOR: Pichincha: km 64, Santo Domingo to Quito via Tandapi. Epiphytic, 1900 m, 2 March 1986, ***C. H. Dodson, C. A. Luer, A. Hirtz & A. Embree 16345.*** Holotype: RPSC! (Illustration voucher). Isotype: QCNE!

Epidendro trachysepalo Hágsater simile sed foliis longioribus, inflorescentia pluriflora, floribus successivis, sepalis laevibus, petalis anguste ovatis margine integra, labello omnino cum columna connato, 5 carinas graciles et laeves ferenti recedit.

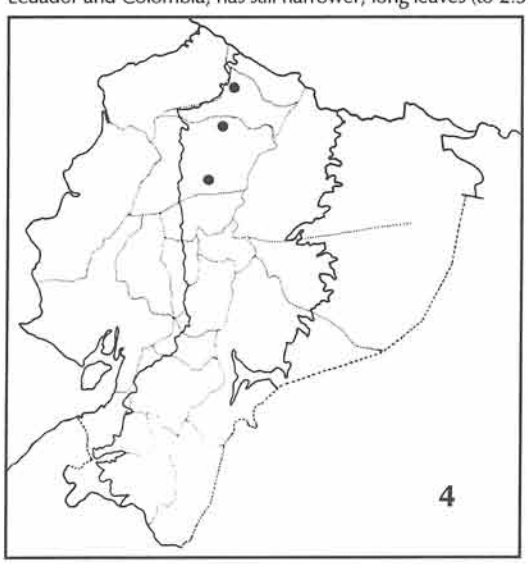
Hierba epífita o terrestre, ramificada, de más de 64 cm de alto. **Raíces** basales y en la base de las ramificaciones, carnosas, delgadas, blancas, 0.7-1.0 mm de grosor. **Tallos** ramificados, tipo caña, teretes, delgados, el principal hasta 64 x 0.2-0.26 cm; las ramas 12.5-20 x 0.1-0.18 cm. **Hojas** 7-8, distribuidas hacia el ápice de los tallos, alternas; vainas tubulares, estriadas, las basales no persistentes, 25-40 x 1.3-3.0 mm; lámina linear lanceolada, lisa, ápice bilobado a desigualmente bilobado, apiculado, margen entero, 5.5-11.6 x 0.26-0.45 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, en el tallo principal como en las ramificaciones, racemosa, ligeramente arqueada, florece una sola vez, 5.0-7.0 cm de largo; pedúnculo corto, terete, delgado, 1.4 cm de largo, ocasionalmente provisto tanto en la base como en la parte media de una bráctea triangular, acuminada, amplexicaule, 4.0-6.0 mm de largo; raquis terete, recto, 5.2 mm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, gradualmente más pequeñas, 2.0 mm de largo. **Flores** hasta 19, distribuidas laxamente a lo largo del raquis, sucesivas, estando abiertas de manera simultánea varias (generalmente más de 4), color café claro o crema; sin datos de fragancia. **Ovario** terete, liso, no inflado, 9.0-14 mm de largo. **Sépalos** entreabiertos, libres, elípticos, subagudos, margen entero; el **dorsal** 3-nervado, 7.0 x 3.0 mm; los **laterales** diminutamente apiculados, oblicuos, 4-nervados, 7.6 x 3.8 mm. **Pétalos** entreabiertos, libres, angostamente ovados, agudos, 3-nervados, margen entero, oblicuos, 6.7 x 2.0 mm. **Labelo** unido a la columna, trilobado, base subtruncada, margen biserrado, 7.5 x 9.8 mm; ecalloso; disco provisto de 5 quillas delgadas y lisas en el área basal, desvaneciéndose hacia la parte media del disco, las laterales cortas; lóbulos laterales hemiorbiculares 2.8 x 5.3 mm; lóbulo medio del mismo tamaño que los laterales, bilobado, los lóbulos redondeados, con un mucrón grueso en el seno apical, 2.3 x 6.3 mm. **Columna** arqueada, el ápice arqueado hacia arriba, 5 mm de largo. **Clinandrio** corto, entero. **Antera** reniforme, 4-locular. **Polinios** 4, ovoides, desiguales. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de ½ del largo de la cavidad estigmática. **Nectario** de la mitad del largo del ovario, liso, no inflado. **Cápsula** no vista.

Epiphytic or terrestrial branching **herb**. **Roots** thin, from the base of the plant and branches. **Stems** branching, cane-like, terete, thin. **Leaves** 7-8, distributed towards the apex of the stems; sheath tubular, striated; blade linear-lanceolate, apex unequally bilobed, apiculate, margin entire. **Inflorescence** apical, racemose, somewhat arching, long. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** up to 19, laxly distributed, successive, up to 4 open at one time, light brown or cream. **Ovary** terete. **Sepals** partly spreading, free, elliptic, subacute, margin entire, **dorsal** 3-veined, **laterals** minutely apiculate, oblique, 4-veined. **Petals** partly spreading, free, narrowly ovate, acute, margin entire, oblique, 3-veined. **Lip** united to the column, 3-lobed, base subtruncate, margin biserrate, ecallose, disc provided with 5 thin, smooth, keels reaching about the middle of the lip; lateral lobes semiorbicular, midlobe about the same size as the laterals, bilobed with a thickened mucro in the middle. **Clinandrium hood** short, entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, unequal. **Nectary** penetrating half the ovary.

OTHER SPECIMENS: ECUADOR: Imbabura: Otavalo-Selva Alegre, 2200 a 2600 m, 14 II 1989, *Palacios 3772,* QCNE! **Pichincha:** Nanegal, IV 1901, *Sodiro s.n.,* QPLS!

DISTRIBUTION AND ECOLOGY: Known only from western Ecuador. Growing on small trees on very steep hillsides at 1900-2600 m. Flowering in February and April.

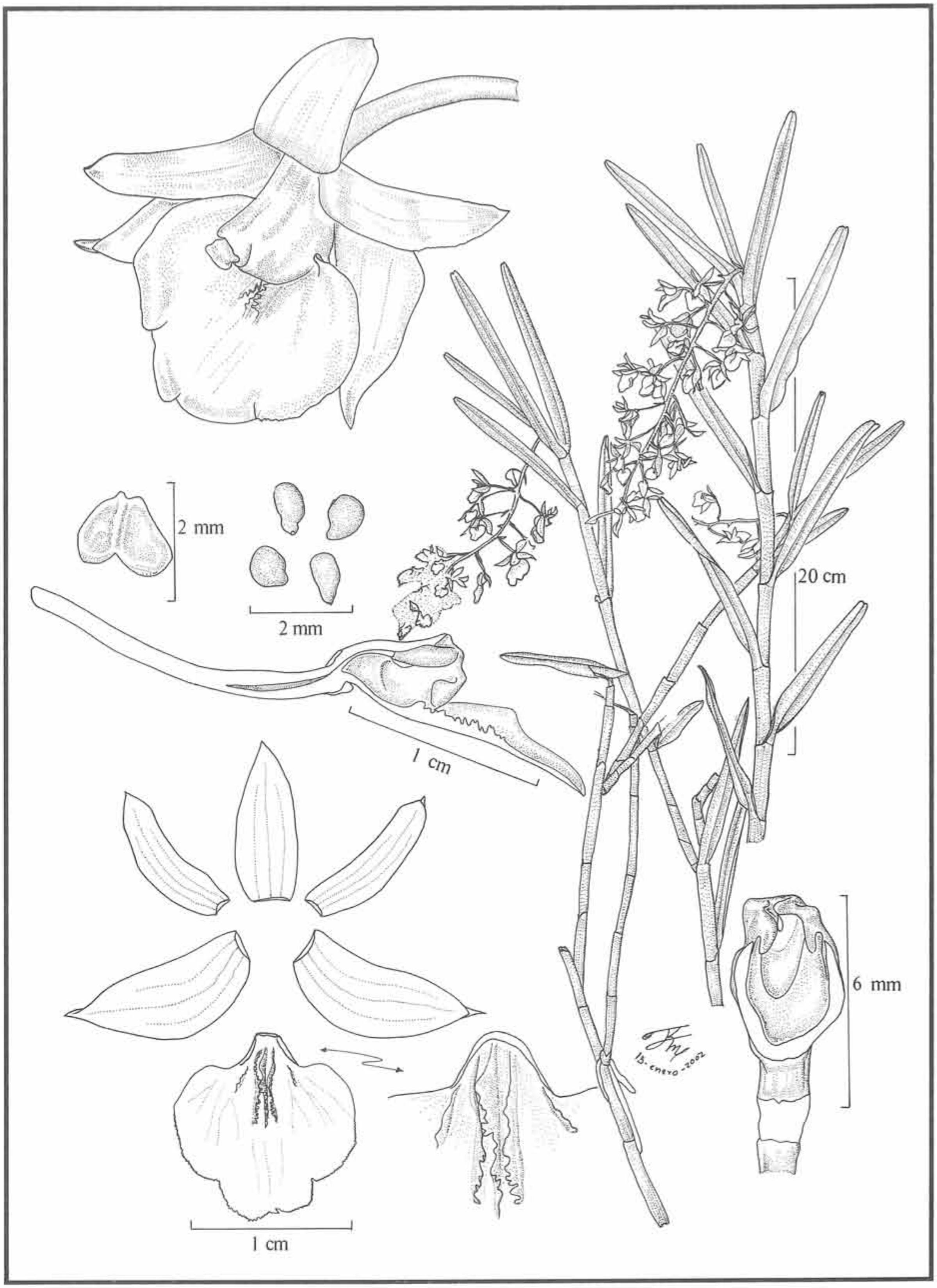
RECOGNITION: *Epidendrum dodsonii* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose without or with 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The new species is recognized by the thin stems, linear-lanceolate leaves less than 5 mm wide, successive flowers on a 5-7 cm long inflorescence, sepals 7.0-7.6 mm long, petals narrowly ovate with entire margin, and the lip united to the arched column provided with 5 keels. It keys out next to *Epidendrum dolichorhachis* Hágsater & Dodson, which has thicker stems, wider leaves (4-12 mm), simultaneous, larger flowers, (sepals 8-12 mm), oblong petals, the keels of the lip are erose, the column forms a short arch at the base and then the upturned apex makes it sigmoid dorsally. *Epidendrum trachysepalum* from Peru, also has thin stems and narrow long leaves, but it has a short (2.5 cm) inflorescence, simultaneous flowers, 9.5-11 mm long sepals, strongly uncinate dorsally, petals linear to linear-lanceolate, the margin minutely erose and the lip united obliquely to the column and forming a prominent sac at the base. *Epidendrum cochabambanum* Dodson & Vásquez (syn.: *Epidendrum stenophyllum* Hágsater & Dodson), known from Bolivia, Peru, Ecuador and Colombia, has still narrower, long leaves (to 2.5 mm wide), a short inflorescence (2-3.5 cm), dorsally granulose sepals, linear-elliptic petals, the union of the column and the entire lip form a sac, and the column is provided with a pair of square corners near the base of the sides that unite it to the lip. *Epidendrum microdiothoneum* Hágsater & Dodson has much shorter leaves, (to 5.5 cm), a glomerulose inflorescence, with simultaneous, small flowers with a strong odor of fresh pears, the ovary inflated ventrally along 2/3 of its length, elliptic petals and the lip united obliquely to the arched column.



CONSERVATION STATUS: DD. Data deficient. The species has been collected thrice along seldom traveled roads, and thus appears to be very rare.

ETYMOLOGY: In honor of Calaway H. Dodson, founding director of The Marie Selby Botanical Gardens (Sarasota, Florida), he has dedicated his life to the understanding and description of the orchids of Ecuador and collected the type specimen of this species. He has also been a mentor and teacher for many orchid specialists, mainly but not only, in tropical America. For his work in Ecuador he was decorated with the Orden Nacional al Mérito en el Grado de Caballero by the President of Ecuador.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM DOLICHORHACHIS Hágsater & Dodson — **Plate 733**

EPIDENDRUM DOLICHORHACHIS Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Cotopaxi: Km 85, Quevedo-Latacunga, 2800 m, terrestrial, 18 February 1985, ***C. H. & P. M. Dodson 15569.*** Holotype: RPSC! (Illustration voucher). Isotypes: AMES! MO! QCA! QCNE!

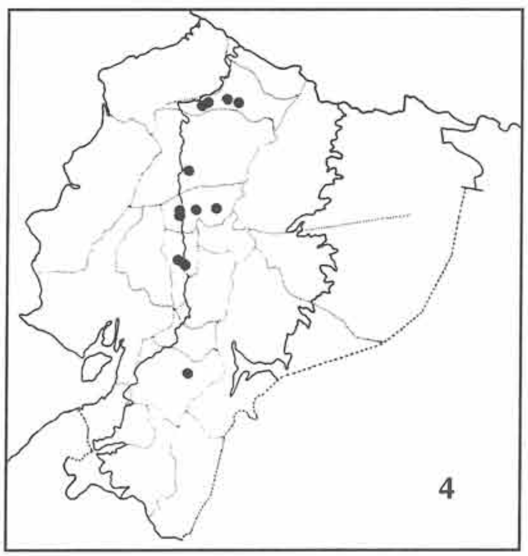
Epidendro heteroneuro (Rchb.f. & Warsc.) Hágsater & Dodson simile sed inflorescentia elongata multiflora, floribus minoribus, petalis oblongis sursus arcuatis, labello 5 carinas eroso-serrulatas ferenti discrepans.

Hierba terrestre o epífita, ramificada, de 50-75 cm de alto. **Raíces** numerosas en la base del tallo, ocasionales en las ramas inferiores, carnosas, gruesas, blancas, 0.7-3.5 mm de grosor. **Tallos** ramificados, rectos, tipo caña, teretes, delgados a gruesos, producidos del tercio apical del tallo anterior; los principales de 30-43 x 0.2-0.7 cm; las ramificaciones, 6-30 x 0.18-0.35 cm. **Hojas** 6-13, distribuidas hacia la zona media apical de los tallos, alternas, subcoriáceas; vaina tubular, estriada, algunas teñidas de púrpura, 15-40 x 1.8-6 mm; lámina angostamente lanceolada, ápice bilobado, con una quilla dorsal baja, margen entero, ligeramente revoluto cuando seco, lisa, 2.6-11.4 x 0.5-1.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueado nutante, laxa, florece una sola vez, multiflora, 6-12.5 cm de largo; pedúnculo corto, terete, delgado, 0.6-2.0 cm de largo. **Brácteas florales** más cortas que el ovario, triangulares, agudas a largamente acuminadas, 2-8 mm de largo. **Flores** 18-30, simultáneas, resupinadas, membranáceas, raramente carnosas, color café claro hasta verdusco, ocasionalmente amarillentas con puntos violetas, sin datos de fragancia. **Ovario** terete, delgado, liso, no inflado, 9-19 mm de largo. **Sépalos** entreabiertos, libres, agudos, 3-nervados, margen entero, [7.5]8.5-12 x 3.6-5 mm; el **dorsal** angostamente ovado; los **laterales** angostamente elípticos, aristados, oblicuos. **Pétalos** entreabiertos, libres, ligeramente arqueados hacia arriba, oblongos, subagudos, diminutamente apiculados, 3-nervado, margen entero, 6.7-10 x 2.3-2.6 mm. **Labelo** unido a la columna, formando una apertura amplia desde la base hacia el ápice del mismo, trilobado, base ligeramente cordada, margen denticulado hacia la zona media apical, [8]10 x [9]11.3 mm; ecalloso, disco provisto de 5 quillas fuertemente erosas-serruladas, las 3 centrales alargadas casi hasta la parte media del disco, el par lateral mucho más corto; lóbulos laterales hemiorbiculares, redondeados, 3.6 x 7.6 mm; lóbulo medio anchamente cuadrado, ligeramente emarginado. **Columna** corta, gruesa, ligeramente sigmoide, dorsalmente arqueada hacia arriba en el ápice, ventralmente provista de un par de alas gradualmente más anchas de la base hacia el ápice de la columna, cortamente involutas, 6 mm de largo. **Clinandrio** corto, entero. **Antera** reniforme, con una quilla roma al frente, 4-locular. **Polinios** 4, ovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, delgados, de 1/3 del largo de la cavidad estigmática. **Nectario** una cavidad amplia, triangular, no ornamentada, sin penetrar el ovario. **Cápsula** no vista.

Branching, terrestrial or epiphytic **herb. Roots** numerous at the base of the plant, thick, occasionally above. **Stems** branching, straight, cane-like, terete, produced from the upper third of the previous stem, progressively shorter. **Leaves** 6-13, distributed towards the apical half of each stem; sheath tubular, striated; blade narrowly lanceolate, apex bilobed, with a low dorsal keel, subcoriaceous, margin entire. **Inflorescence** apical, racemose, arching-nutant, laxa, flowering only once; peduncle short, rachis elongate, terete, straight. **Floral bracts** shorter than the ovary, triangular, acuminate. **Flowers** 18-30, simultaneous, resupinate, membranaceus, rarely fleshy, light brown to greenish, occasionally yellowish with violet dots, not fragrant. **Ovary** terete, thin. **Sepals** partly spreading, free, acute, margin entire, 3-veined; **dorsal** narrowly ovate; **laterals** narrowly elliptic, aristate, oblique. **Petals** partly spreading, free, oblong, subacute, minutely apiculate, arching upwards, margin entire, 3-veined. **Lip** united to the column, forming a wide, oblique aperture, 3-lobed, base slightly cordate, margin denticulate towards the apical half; ecallose, disc provided with 5 strongly erose-serrulate keels, the three mid-keels nearly reaching the middle of the lip, the lateral keels much shorter, surface of the lip unornamented; lateral lobes hemi-orbicular, rounded, midlobe widely subquadrate, somewhat emarginate. **Column** short, thick, slightly sigmoid dorsally, arching upwards towards the apex, ventrally with a pair of wings gradually wider from the base to the apex of the column, slightly involute. **Clinandrium hood** short, entire. **Rostellum** apical, slit. **Nectary** a wide cavity formed by the column and lip, without penetrating the ovary.

OTHER SPECIMENS: ECUADOR: Azuay: Molleturo, 2800 m, 01 XI 1994, *Cornejo 3541,* QCNE! Hort. Cuenca, Ecuagenera, 2000 m, *Hágsater 12265,* AMO! **Bolivar:** Guaranda-Caluma, 2800 m, 10 III 1982, *Luer 7255,* SEL! Ibid. *7256,* SEL! **Cotopaxi:** Pilaló, 2725 m, 19 XII 1976, *Boeke 543,* MO!, NY!, QCA, SEL! Quevedo-Latacunga, 2800-3200 m, 14 II 1963, *Dodson 2252,* AAU! SEL! Ibid. 3300 m, 5 V 1985, *Dodson 15842,* AMES, MO!, QCA!, QCNE Ibid. *Hágsater 7602,* AMO! QCNE! Ibid. 3450-3500 m, 8 IV 1973, *Holm-Nielsen 3300,* AAU! AMES. [habit unusually robust] Ibid. 26 IV 1979, *Løjtnant 13756,* AAU! (x2) GB! **Imbabura:** Otavalo-Selva Alegre, 2700 m, 5 II 1985, *Dodson 16322,* QCA! RPSC! Cuicocha-Selva Alegre, 2600 m, 6 XII 1986, *Hágsater 9196,* AMO! COL! QCNE! Selva Alegre, 1400 m, V 1989, *Hirtz 4246,* RPSC! Intag to Apuela, 2700 m, 7 V 1980, *Holm-Nielsen 23308,* AAU! Ibid. *23311,* AAU! Otavalo-Apuela, 2000-2500 m, 8 II 1979, *Luer 3929,* SEL! **Pichincha:** Quito-Santo Domingo, 2800 m, 3 II 1983, *Dodson 13642,* SEL!

DISTRIBUTION AND ECOLOGY: Ecuador, upper western slope of the Andes, growing at [1400]2000-3350 m, epiphyte or terrestrial in Montane Forest or on road banks. Flowering throughout the year.



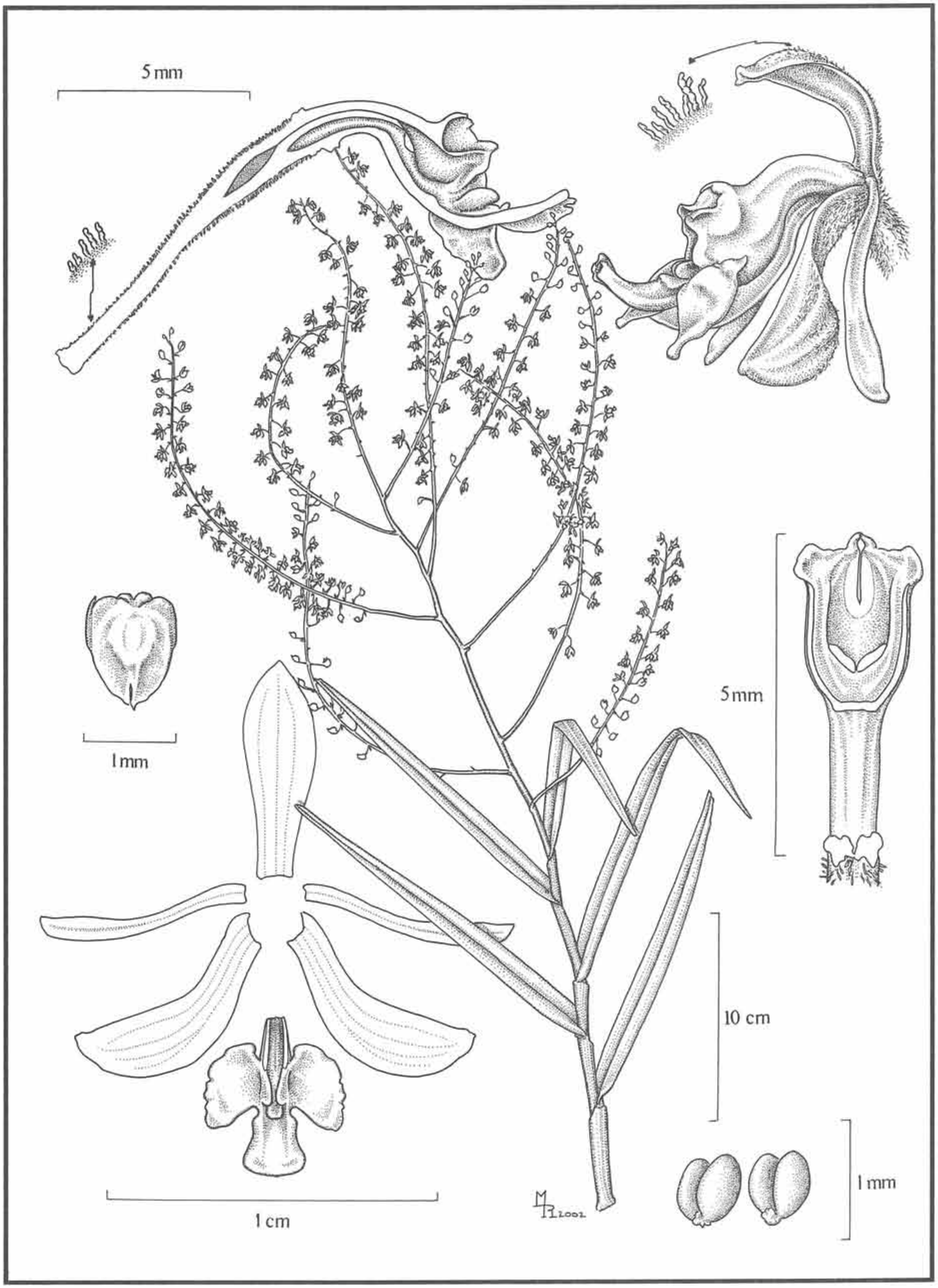
RECOGNITION: *Epidendrum dolichorhachis* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose without or with 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The new species is distinguished by the elongate rachis of the inflorescence, the oblong-lanceolate petals arched upwards, the lip united to the column, with 5 erose-dentate keels, the central keels reach the center of the lip and the lateral keels much shorter, the thick column is dorsally sigmoid, with the apex arched upwards. It is similar to *Epidendrum heterothoneum* which has shorter branches, the rachis of the inflorescence compact, 2-3 cm long, with up to 10 flowers, these larger, the sepals 15-16 mm long and the petals linear, 1.5 mm wide. *Epidendrum suavis* (Rchb. f. & Warsc.) Løjtnant has a similar vegetative architecture, fewer flowers on the inflorescence, the flowers larger, petals obtrullate, the lip obliquely united to the column which is 8 mm long, the lip entire, ovate or subovate.

CONSERVATION STATUS: DD. Data deficient. The species is rather common and widespread, as can be noted from the numerous herbarium specimens.

ETIMOLOGY: From the Greek δολιχος- long, and ραχις- rachis, in reference to the relatively elongate rachis of the inflorescence typical of this species.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM ELEPHANTINUM Hágsater

Plate 734

EPIDENDRUM ELEPHANTINUM Hágsater, *sp. nov.*

Type: PANAMÁ: Darién: Parque Nacional del Darién W slope of Cerro Mali, on ridge between N & S branches of Río Púcuro; ca. 18 km E of Púcuro, 8°04´N 77°16´W, 1000-1200 m, 22 October 1987, ***B. Hammel, G. de Nevers, H. Cuadros & H. Herrera 16421.*** Holotype: MO! (Illustration voucher).

Epidendro pubifloro C. Schweinf. simile sed foliis longis et anguste lanceolatis, floribus minoribus, petalis angustioribus linearibus differens.

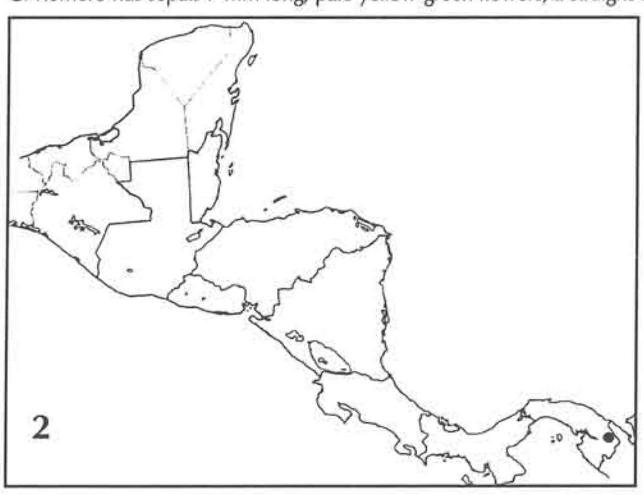
Hierba epífita, de más de 53 cm de altura. **Raíces** no vistas. **Tallos** sencillos, tipo caña, rectos, teretes, ligeramente engrosados hacia la parte media, de más de 20 x 0.5-0.8 cm. **Hojas** por lo menos 5, distribuidas hacia la mitad apical del tallo, alternas, articuladas, subcoriáceas; vaina tubular, finamente estriada en seco, 2.5-5.0 x 0.5-0.8 cm; lámina angostamente lanceolada, ápice desigualmente bilobado, lisa, margen entero, 16-21.5 x 1.2-1.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, paniculada, grande, suberecta, 36 cm de alto; provista de 10 racimos multifloros, ligeramente arqueados hacia arriba, 13.5-22 cm de largo; pedúnculo corto, recto, terete, grueso, no ornamentado, desprovisto de brácteas, 3 cm de largo; raquis terete, recto, gradualmente más delgado hacia el ápice, ligeramente ornamentado con tricomas submoniliformes, 33 cm de largo. **Flores** ca. 250, 20-40 por racimo, resupinadas, simultáneas, color crema, sin datos de fragancia. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 1 mm de largo. **Ovario** terete, delgado, ligeramente inflado justo detrás del perianto, profusamente ornamentado con tricomas moniliformes, 5-7 mm de largo. **Sépalos** entreabiertos, libres, oblanceolados, 3-nervados, cóncavos en el ápice, subagudos, margen entero, membranáceos, profusamente ornamentados en la parte dorsal con tricomas moniliformes, 5.0-6.6 x 1.3-2.1 mm; el **dorsal** cuculado, los **laterales** subparalelos con respecto a la columna, falcados. **Pétalos** descendentes con respecto a la columna, libres, lineares, ligeramente ensanchados en el ápice, obtusos, 1-nervados, margen entero, 5.0-6.4 x 0.6-0.7 mm. **Labelo** unido a la columna, trilobado, base cordada, 4.0 x 4.3 mm; bicalloso, los callos prominentes, láminares, alargados hasta la base del lóbulo medio; disco provisto de carina central corta, baja, gruesa, intercallosa, truncada en el ápice; lóbulos laterales oblicuamente dolabriformes, margen irregular, escasamente crenado, 1.7 x 2.7 mm; lóbulo medio campaniforme, truncado en el ápice, los lados revolutos y todo arqueado hacia arriba en posición natural de manera que se asemeja a la trompa de un elefante, 2 x 1.8 mm. **Columna** corta, la mitad basal fuertemente arqueada, el ápice abultado por el clinandrio, terminada en un par de dientes laterales, 5 mm de largo. **Clinandrio** prominente, abultado, dorsalmente corto, margen con dos o tres senos profundos. **Antera** ovoide, 4-locular. **Polinios** 4, ovoides, lateralmente comprimidos, con la cara interna de cada par algo plana; caudículas suaves y granulosas, cortas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de ¼ del largo de la cavidad estigmática. **Nectario** corto, apenas penetrando el ovario, no inflado, liso. **Cápsula** no vista.

Epiphytic **herb. Stems** simple, cane-like, terete, slightly thickened towards the middle. **Leaves** at least 5, distributed towards the apical half of the stem, alternate, articulate, subcoriaceous; sheath tubular, minutely striated when dry; blade narrowly lanceolate, apex unequally bilobed, smooth, margin entire. **Inflorescence** apical, a large panicle, suberect, provided with 10 many-flowered, branches, these arched upwards; peduncle short, straight, terete, thick, smooth, without bracts; rachis terete, gradually thinner towards the apex, scarcely ornamented with moniliform trichomes. **Flowers** about 250, 20-40 per raceme, resupinate, simultaneous, cream-colored. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** terete, thin, slightly inflated just behind the perianth, profusely ornamented with moniliform trichomes, 5-7 mm long. **Sepals** partly spreading, free, oblanceolate, 3-veined, concave towards the apex, subacute, margin entire, membranaceous, profusely ornamented dorsally with moniliform trichomes; the **dorsal** sepal cucullate, the **laterals** subparallel to the column, falcate. **Petals** descending, free, linear, somewhat widened towards the apex, obtuse, 1-veined, margin entire. **Lip** united to the column, 3-lobed, base cordate; bicallose, the calli prominent, laminar, elongate to reach the base of the midlobe, disc provided with a central, short, low, thick keel in between the calli, truncate at the apex; lateral lobes obliquely dolabriform, margin irregular, scarcely crenate; midlobe bell-shaped, the apex truncate, the sides revolute and the whole upturned in natural position so as to appear like the snout of an elephant. **Column** short, arching at the base, the apex with the clinandrium hood prominently humped. **Clinandrium hood** prominent, upturned, short, margin with a couple of deep slits. **Anther** obovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, the inside face of each pair somewhat flat, caudicles soft and granulose, short. **Rostellum** apical, slit. **Nectary** short, barely penetrating the ovary, thin, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, on the upper western slopes of the Serranía del Darién, near the Panamanian-Colombian border, at around 1000-1200 m altitude. Flowering in October.

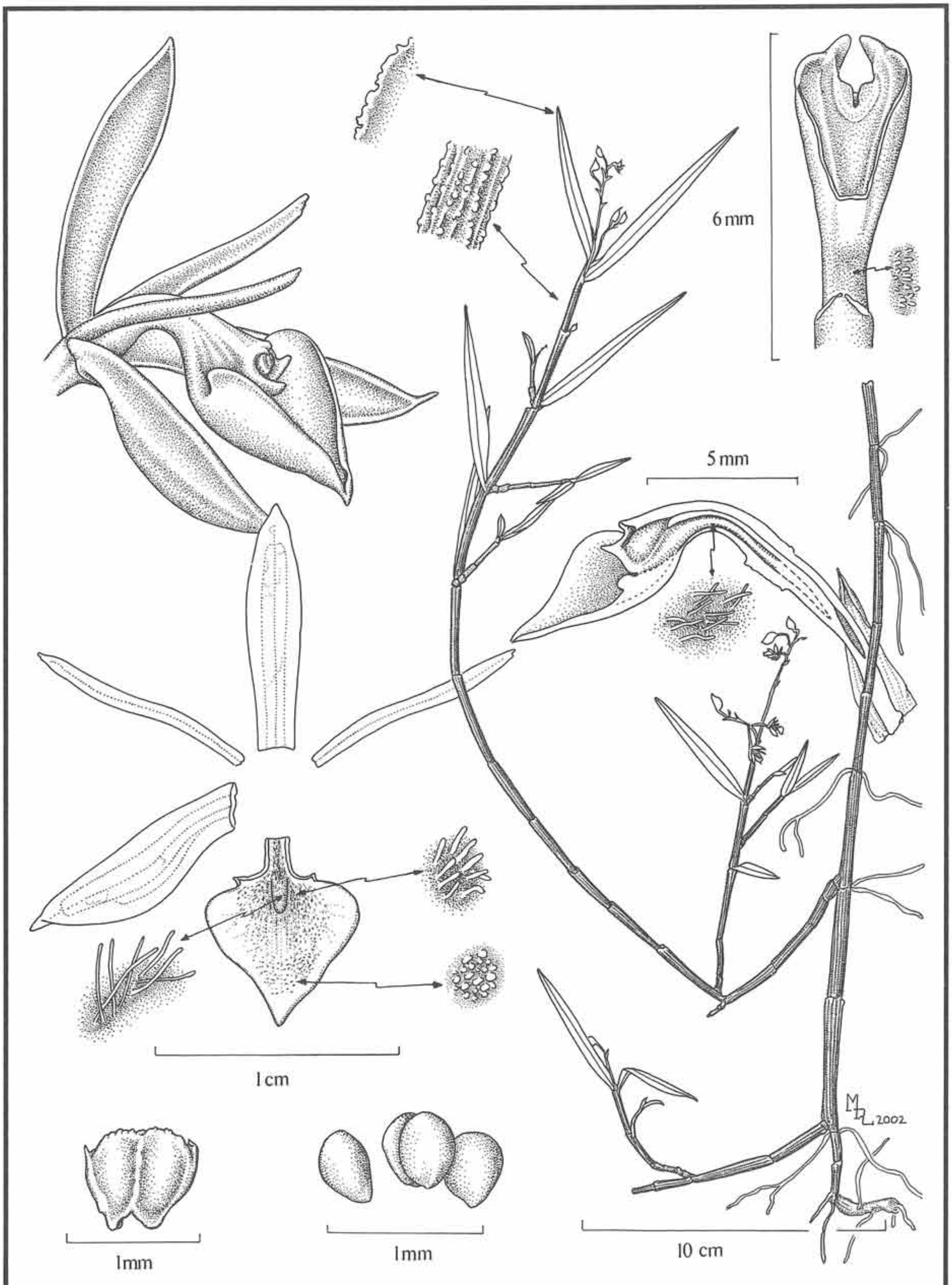
RECOGNITION: *Epidendrum elephantinum* belongs to the Amblostomioides Group which is characterized by the caespitose habit, the thinly fusiform stems with narrow, apically bilobed, subcoriaceous leaves distributed along the apical half of the stems, an often large, apical, erect, paniculate inflorescence, the flowers greenish-yellow to white, the ovary and the sepals usually dorsally pubescent, and the lip 3-lobed. The species is recognized by the strongly pubescent ovaries and sepals (dorsally), the strongly arched column, with the humped clinandrium hood, the small flowers (sepals 5.0-6.6 mm) and the bell-shaped midlobe with the lateral margins revolute and the whole upturned so as to look like an elephant's trunk. It closely resembles *Epidendrum pubiflorum* from the Amazonian slope in Peru, which has oblong, apically rounded, bilobed leaves, larger flowers (sepals 9-11 mm), and the petals 2 mm wide. *Epidendrum caurense* Carnevali & G. Romero has sepals 7 mm long, pale yellow-green flowers, a straight column, and an oblong midlobe. *Epidendrum lanipes* Lindl. has 10-12 mm long sepals, white, strongly fragrant flowers, a straight column, and large, sturdy stems with leaves 17-25 mm wide. *Epidendrum purum* Lindl. has glabrous ovaries and sepals, sepals 6-7 mm long and an arched column. *Epidendrum hartii* Rolfe has glabrous ovaries and sepals which are 7-8 mm long, and a straight column.



CONSERVATION STATUS: DD. Data deficient. The type locality is within the Parque Nacional del Darién.

ETYMOLOGY: An Elephant, in reference to the appearance of the lip: the large lateral lobes hanging down resemble the large ears and the midlobe upturned with the lateral margins revolute, like the trunk of an Elephant.

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EPIDENDRUM ELLEANTHODICERAS Hágsater & E. Santiago **Plate 735**

EPIDENDRUM ELLEANTHODICERAS Hágsater et E. Santiago, *sp. nov.*

Type: COLOMBIA: Huila, La Plata, 2600 m, 15 March 1939, ***Kjell von Sneidern 2008.*** Holotype: S! (Illustration voucher). Isotype: AMES!

Epidendro elleanthoide Schltr. simile sed floribus duplo majoribus, labello triangulari unicalloso, columna gracili arcuata utraque in dentem acutum terminanti discrepans.

Hierba epífita, erecta, ramificada, de más de 100 cm de alto. **Raíces** de la región inferior del tallo principal y ocasionalmente escasas en la base de algunas ramificaciones, delgadas, carnosas, blancas, 0.6-1.8 mm de grosor. **Tallos** ramificados, teretes, delgados, el principal de más de 42 x 0.27-0.40 cm, las ramificaciones, de varios órdenes, progresivamente más cortas, 6-29 x 0.16-0.23 cm. **Hojas** del tallo principal no vistas, 2-7 en las ramas, distribuidas hacia la zona media apical, erectas, dísticas, gramíneas; vaina tubular, finamente estriada y verrugosa, 1.3-3.5 x 1.6-4.0 mm; lámina linear lanceolada, ápice agudo, margen diminutamente crenado, con una quilla dorsal baja; 1.6-8.2 x 0.3-0.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, paniculada, erecta, 2-4.8 cm de largo; pedúnculo muy corto, terete, delgado, provisto en el ápice de una bráctea semejante a las florales, triangular, acuminada, 3-9 mm de largo; raquis filiforme, recto, 1.3-3.5 mm de largo. **Brácteas florales** más cortas que el ovario, triangulares, acuminadas, uninervadas, 2-4 mm de largo. **Flores** 3-5 por racimo, simultáneas, dísticas, sin datos de color ni fragancia. **Ovario** corto, terete, delgado, no inflado, no ornamentado, 4-7 mm de largo. **Sépalos** entreabiertos, libres, angostamente elíptico oblanceolados, agudos, 3-nervados, margen entero, membranáceos, 10 x 2.2-2.8 mm; los **laterales** oblicuos, con una quilla dorsal prominente, aristados. **Pétalos** entreabiertos, libres, lineares, ápice agudo, 1-nervados, margen entero, 9.5 x 0.8 mm. **Labelo** unido a la columna, entero, triangular, base truncada, ápice agudo, margen entero, en posición natural abrazando parcialmente el ápice de la columna sin envolverla por completo, 6.3 x 6.3 mm; fuertemente pubescente en la base, papiloso hacia el ápice, monocalloso, el callo corto, laminar con el ápice redondeado, fuertemente pubescente. **Columna** larga, fuertemente arqueada, delgada, provista en el ápice de un par de dientes laterales prominentes y agudos, superficie ventral cortamente pubescente en la base, 6 mm de largo. **Clinandrio** reducido, entero. **Antera** anchamente ovada, 4-locular. **Polinios** 4, obovoides. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando cerca de la mitad del ovario, pubescente. **Cápsula** no vista.

Epiphytic, erect, branching **herb. Roots** produced from the lower part of the main stem and occasionally from the base of the branches, thin. **Stems** erect, terete, thin, branching, the successive branches becoming shorter. **Leaves** 2-7 on the branches, distributed along the apical half of the stems, grassy; sheath tubular, minutely striated and verrucose; blade linear-lanceolate, acute, margin minutely crenate. **Inflorescence** apical, paniculate, erect; peduncle thin, short, rachis filiform, straight. **Floral bracts** shorter than the ovary, triangular, acuminate, 1-veined. **Flowers** 3-5 per raceme, simultaneous. **Ovary** short, terete, thin. **Sepals** partly spreading, narrowly elliptic-oblanceolate, acute, 3-veined, membranaceus, margin entire, the laterals oblique, with a prominent dorsal keel, aristate. **Petals** partly spreading, free, linear, acute, 1-veined, margin entire. **Lip** united to the column, entire, triangular, base truncate, apex acute, margin entire, pubescent at the base, the apex papillose, the sides upturned and embracing the column without covering it; callus single, laminar, rounded, long-pubescent. **Column** strongly arching, thin, provided apically on each side with a prominent acute tooth; the basal ventral surface short-pubescent. **Clinandrium hood** reduced, entire. **Anther** wide, ovate, 4-celled. **Pollinia** 4, obovoid. **Rostellum** subapical, slit. **Nectary** penetrating about half the ovary, pubescent.

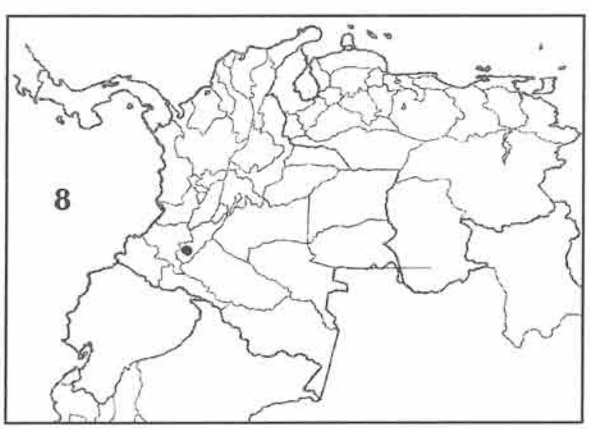
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Endemic to southern Colombia, on the eastern slopes of the Cordillera Central, epiphytic in primeval forest at 2600 m altitude. Flowering in March.

RECOGNITION: *Epidendrum elleanthodiceras* belongs to the Elleanthoides Group characterized by the thin, branching stems, long, linear, grass-like leaves, filiform peduncle and rachis of the inflorescence. The new species is recognized by the relatively large flowers (for the group: sepals 10 mm long), acute teeth at the apex of the long, thin, arched, column, unlike any other species of the group, and triangular lip. *Epidendrum elleanthoides* has smaller flowers, the sepals 3.7-4.4 mm lonng, lip transversely ovate, and bicarinate callus. *Epidendrum guacamayense* Hágsater & Dodson, has sepals 7.0-7.5 mm long, the ecallose lip completely embracing and covering the column. *Epidendrum montispichinchense* Hágsater & Dodson has a short, thick, straight column, forming a wide cavity with the lip, sepals are shorter, 6.4-6.8 mm long, the apical margin of the leaves is entire. This species appears to grow in the general area, represented by *G. Lozano et al. 4264,* collected above Finca Palmira, Mpio. La Argentina, COL, slide at AMO!

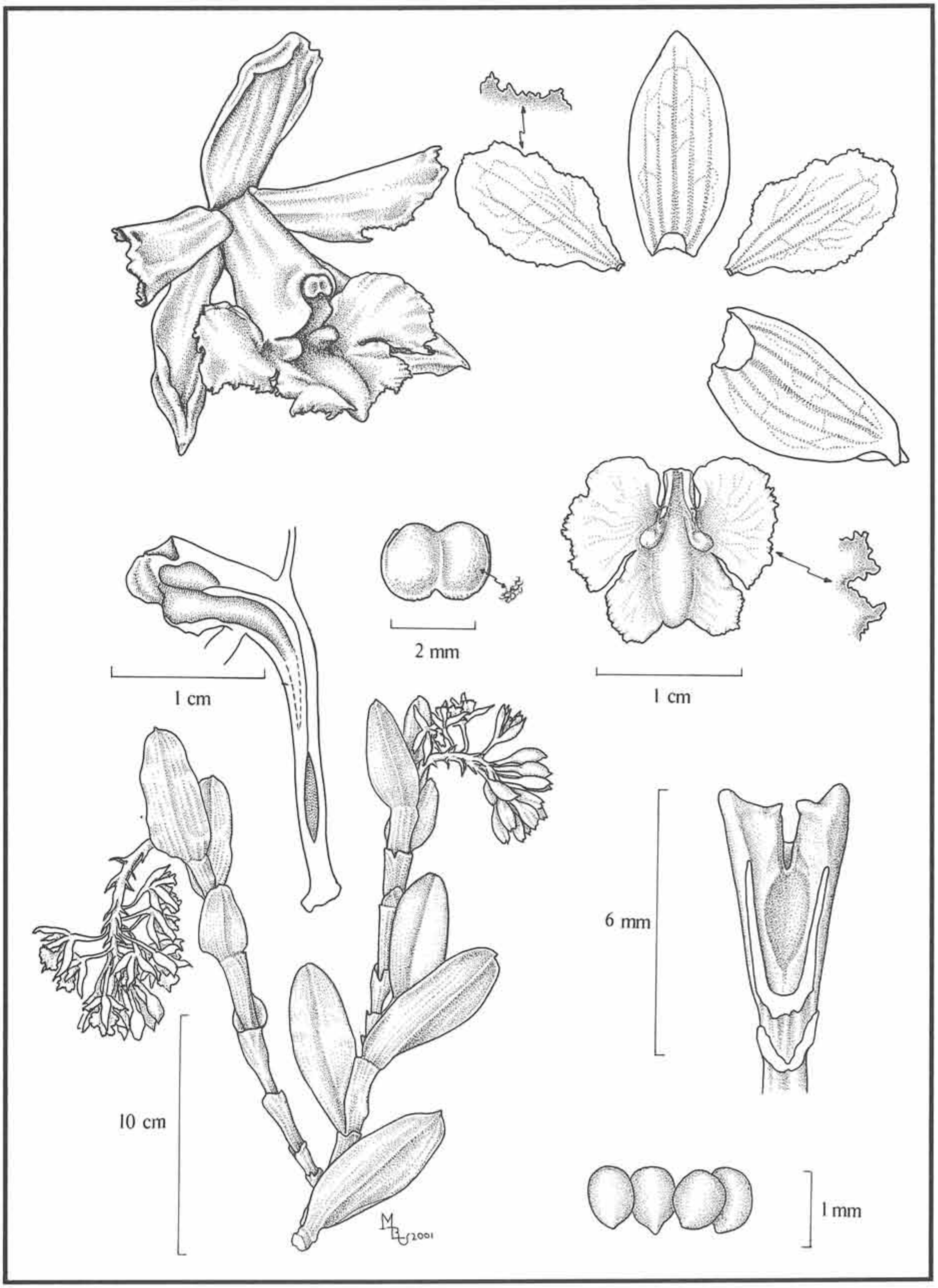
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek. The name *Elleanthus* is derived from Helle, the mythical daughter of the pharaoh Nofretete, and ανθος- flower, and δυο- two and κερας- horn, thus two-horned elleanthoides, in reference to the two-horned column of this species which distinguishes it from other species of the Elleanthoides Group.



Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM FAGERLINDII Hágsater & Dodson Plate 736

EPIDENDRUM FAGERLINDII Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Carchi: Tulcán road to El Carmelo, near El Carmelo, 3200 m, 6 February 1959, ***Gunnar Harling 4226.*** Holotype: S! (Illustration voucher).

Epidendro lawessonii Hágsater & Dodson simile sed florescentia successiva, petalis ellipticis erosis, labelli lobulis lateralibus lobuli medii magnitudinem aequantibus, transverse semiovatis, margine erosis, isthmo brevissimo angustoque recedens.

Hierba terrestre, ramificada subapicalmente, 150-200 cm de alto. **Raíces** basales y en la base de los entrenudos donde se producen algunas de las ramificaciones, gruesas, carnosas, blancas, 3 mm de grosor. **Tallos** ramificados, tipo caña, teretes; el principal 150-200 x 0.75-1.1 cm; las ramificaciones cortas, 16-17 x 0.8-1.1 cm. **Hojas** numerosas en el tallo principal, 5-6 en las ramas, distribuidas a lo largo de los tallos; vaina tubular, estriada y rugosa, hasta 3.8 cm de largo; lámina elíptico lanceolada, desigualmente bilobada, con una quilla dorsal baja, margen entero, subcoriácea, las del tallo principal, 7 x 2.9 cm; las de las ramas 3-6 x 1.7-2.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, tanto en el tallo principal como en las ramas; racemosa, nutante, florece una sola vez, las flores abren de la base de la inflorescencia hacia el ápice, 6-8 cm de largo; pedúnculo corto, terete, no ornamentado, desprovisto de brácteas, 7 mm de largo. **Brácteas florales** de la mitad del largo del ovario, triangulares, acuminadas, 5.5-7 mm de largo. **Flores** hasta 25, mas o menos sucesivas, estando abiertas hasta unas 12 a la vez, resupinadas, color verde amarillentas, sin datos de fragancia. **Ovario** terete, liso, ligeramente dilatado justo detrás del perianto, 13-28 mm de largo. **Sépalos** extendidos, libres, margen entero, carnosos, 5-nervados; el **dorsal** elíptico, agudo, 16 x 7 mm; los **laterales** ovados, subagudos, oblicuos, aristados 15 x 8.3 mm. **Pétalos** extendidos, libres, elípticos, ápice redondeado, 3-nervados, las nervaduras cortamente ramificadas, margen eroso, 13 x 7 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, margen eroso, 13 x 15 mm; bicalloso, los callos pequeños, subglobosos, cerca del istmo; disco unicarinado, la carina gruesa, roma, alargada hasta el seno apical; lóbulos laterales transversalmente semiovados, 5.6 x 9.3 mm; lóbulo medio subtriangular, bilobado, lóbulos redondeados, 6.6 x 10 mm. **Columna** recta, gruesa, 6 mm de largo dorsalmente. **Clinandrio** reducido, entero. **Antera** reniforme, papilosa, 4-locular. **Polinios** 4, obovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando ca. de ½ del largo del ovario, no ornamentado. **Cápsula** no vista.

Terrestrial, tall, subapically branching **herb. Stems** terete, branches short. **Leaves** numerous on the main stem, 5-6 on the branches, sheaths tubular, rugose and striated, blade elliptic-lanceolate, unequally bilobed, subcoriaceous. **Inflorescence** apical, racemose, nutant, flowering only once. **Floral bracts** half as long as the ovary, triangular, acuminate. **Flowers** more or less successive, about 12 open at one time, resupinate, pale greenish yellow. **Ovary** terete, somewhat dilated behind the perianth. **Sepals** spreading, free, margin entire, fleshy, 5-veined, **dorsal** elliptic, acute, **laterals** ovate, subacute, oblique, aristate. **Petals** spreading, free, elliptic, apex rounded, margin erose, 3-veined, the veins with short branches. **Lip** united to the column, 3-lobed, base deeply cordate, margin erose; bicallose, the calli small, near the isthmus; disc unicarinate, the keel thickened, rounded, extending up to the apical sinus; lateral lobes transversely semiovate; midlobe subtriangular, bilobed, lobes rounded, margin erose. **Column** straight. **Clinandrium hood** reduced, entire. **Anther** reniform, 4-celled, surface minutely papillose. **Pollinia** 4, obovoid. **Nectary** penetrating nearly ½ of the ovary, unornamented.

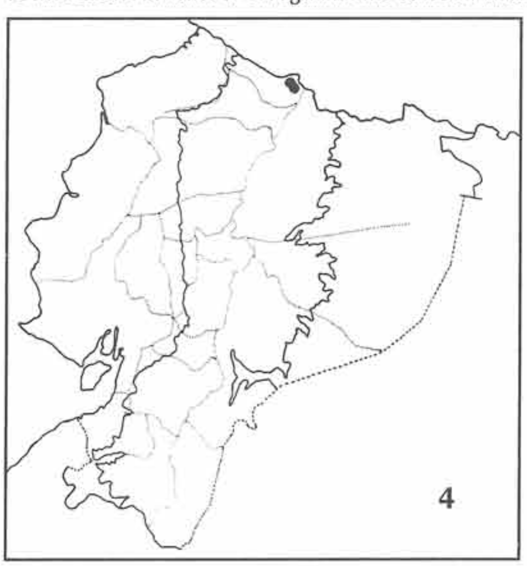
OTHER SPECIMENS: ECUADOR: Carchi: Between El Pun and Tulcán, XI 1952, *Fagerlind1452*, S! High mountains near El Pun, 28 II 1953, *Prescott 638*, DS! NY!

DISTRIBUTION AND ECOLOGY: Known only from northern Ecuador, near the Colombian border, on the peaks of the Cordillera Oriental, at 3200 m altitude, terrestrial along roadsides. Flowering from November to February.

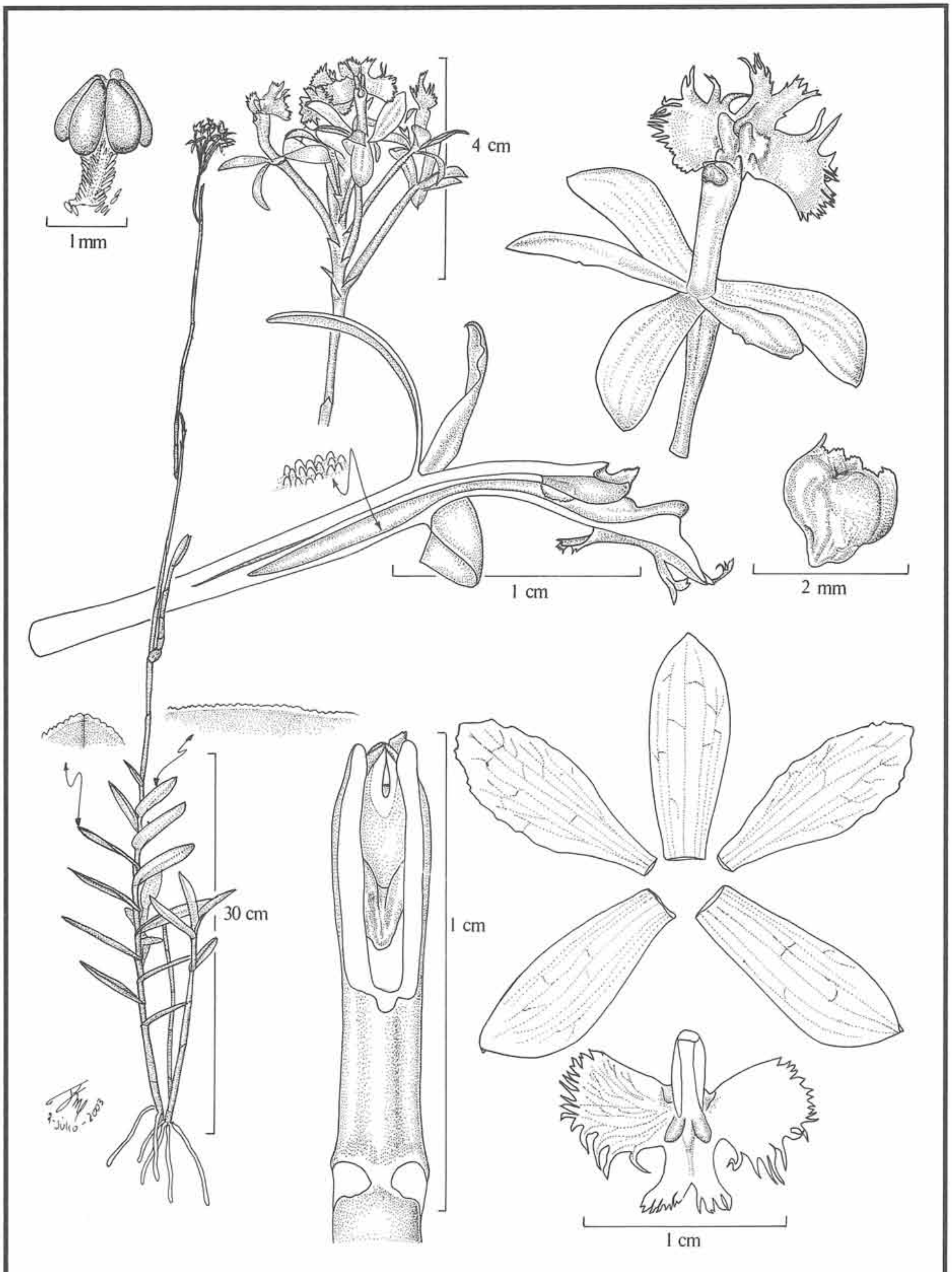
RECOGNITION: *Epidendrum fagerlindii* belongs to the Cernuum Group, Sumacoënse Subgroup which is recognized by having branching stems, bilobed leaves, column adnate to the lip, a three-lobed lip, with the midlobe clearly and deeply bilobed. The new species has large and transversely semiovate lateral lobes of the lip, with an erose margin, the isthmus short so that there is only a very narrow slit between the lateral lobes and the midlobe, 15-16 mm long sepals, elliptic, erose petals. *Epidendrum lawessonii* has much smaller suborbicular lateral lobes of the lip, about 4 mm in diameter, the margin finely dentate. *Epidendrum sumacoënse* Hágsater & Dodson has obcuneate, 1-veined petals, the lip has a long narrow isthmus, with narrow, subquadrate lobes at the apex of the midlobe. *Epidendrum pastoënse* Schltr. also found in the same general area has acuminate sepals and a narrower lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of G. Fagerlind who collected material of this species during his trip to Ecuador in October and November 1952. His material is deposited at S.



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EPIDENDRUM FRANCKEI Hágsater | **Plate 737**

EPIDENDRUM FRANCKEI Hágsater, *sp. nov.*

Type: PERU: Cajamarca, hort. Mexico City, col. Oscar F. Francke, pressed 2 July 2003, ***E. Hágsater 12431.*** Holotype: USM! Isotype: AMO! (Illustration voucher).

Epidendro denticulato Barb. Rodr. simile sed sepalis petalisque obtusis, petalis latioribus margine erosis et venatione ramosa, labelli lobulo medio respectu lobulis lateralibus minore, callis albis, maculam coloratam in disco non formanti differt.

Hierba terrestre, cespitosa, erecta, de 90 cm de alto o más. **Raíces** basales, carnosas, delgadas, 2.2 mm de grosor. **Tallos** sencillos, tipo caña, teretes, delgados, rectos, de más de 25-30 x 0.4-0.5 cm. **Hojas** 12, alternas, distribuidas a lo largo de los 2/3 apicales del tallo; vaina tubular, finamente estriada, 1.5-2.8 x 0.37-0.54 cm; lámina coriácea, lisa, oblongo elíptica, ápice redondeado, levemente bilobado, margen diminutamente eroso, 3.2-7.4 x 1.4-2.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, elongada, 30 cm de largo; pedúnculo alargado, terete, delgado, 27 cm de largo, cubierto casi en su totalidad por 6 vainas tubulares, agudas, finamente estriadas, 3.3-5.5 x 0.2-0.35 cm; del ápice del pedunculo incial se produce otro de características semejantes y de este a su vez otro más corto; raquis abreviado, terete, 2 cm de largo. **Flores** 8, simultáneas, no resupinadas, color rosado, ápice de la columna y callos blancos; sin fragancia. **Brácteas florales** mucho más cortas que el ovario, triangular lanceoladas, agudas, 2-4 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 16-23 mm de largo. **Sépalos** extendidos, libres, angostamente obovados, obtusos, con una quilla dorsal diminuta, 5-6-nervados, margen extendido y entero, 11 x 4.2 mm; los **laterales** oblicuos. **Pétalos** extendidos, libres, angostamente obovados, obtusos, 3-nervados, las nervaduras laterales muy ramificadas en los 2/3 apicales dando la apariencia de ser 5 ó 6 nervados; margen extendido, la mitad apical eroso, 11 x 4.2 mm. **Labelo** unido a la columna, trilobado, base ampliamente cordada, margen profundamente fimbriado, 8 x 13 mm; bicalloso, los callos prominentes, alargados hasta cerca de la base del istmo, disco provisto de una quilla intercallosa pequeña, desvaneciéndose antes de llegar a seno apical; lóbulos laterales semiorbiculares, el margen basal casi recto, 5.5 x 6 mm; lóbulo medio flabelado, ápice bilobado, algo divaricado, con un seno profundo, 3 x 4.5 mm. **Columna** recta, delgada, obcónica en el ápice, ápice bidentado, 10 mm de largo. **Clinandrio** reducido, aserrado a los lados. **Antera** ovada, aguda, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas más largas que los polinios, formadas por tétradas en forma de tejas apiladas. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** erosos, de 1/3 del largo de la cavidad estigmática. **Nectario** penetrando cerca de la mitad del ovario, finamente papiloso. **Cápsula** no vista.

Terrestrial, caespitose, erect, **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, terete, thin, straight. **Leaves** 12, distributed throughout the apical 2/3 of the stems, sheath tubular, minutely striated; blade coriaceous, smooth, oblong-elliptic, apex rounded, slightly bilobed, margin entire. **Inflorescence** apical, racemose, elongate; peduncle elongate, terete, thin, covered nearly totally by acute, tubular, sheaths; rachis abbreviated, terete; produces successive racemes, sometimes on equally long peduncles. **Flowers** 8, simultaneous, non-resupinate, pink with the apex of the column and calli white, without fragrance. **Floral bracts** much shorter than the ovary, triangular, lanceolate, acute. **Ovary** terete, thin, smooth. **Sepals** spreading, free, narrowly obovate, obtuse, with a minute dorsal keel, 5-6 veined, margin spreading and entire, the laterals oblique. **Petals** spreading, free, narrowly obovate, obtuse, 3-veined, the lateral veins much branched so as to appear 5 or 6 veined; margin spreading, the apical half erose. **Lip** united to the column, 3-lobed, base widely cordate, margin deeply fimbriate; bicallose, the calli prominent, reaching the base of the isthmus, with a prominent intermediate, short keel; lateral lobes semiorbicular, the posterior margin nearly straight, midlobe flabellate, the apex bilobed somewhat divaricate, with a deep sinus. **Column** straight, thin, the apex bidentate. **Clinandrium hood** reduced, entire, the sides serrate. **Anther** ovate, acute, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles longer than the pollinia, formed by tetrads which appear as stacked roof-tiles. **Rostellum** subapical, slit. **Nectary** penetrating about half the ovary, minutely papillose.

OTHER SPECIMENS: None seen.

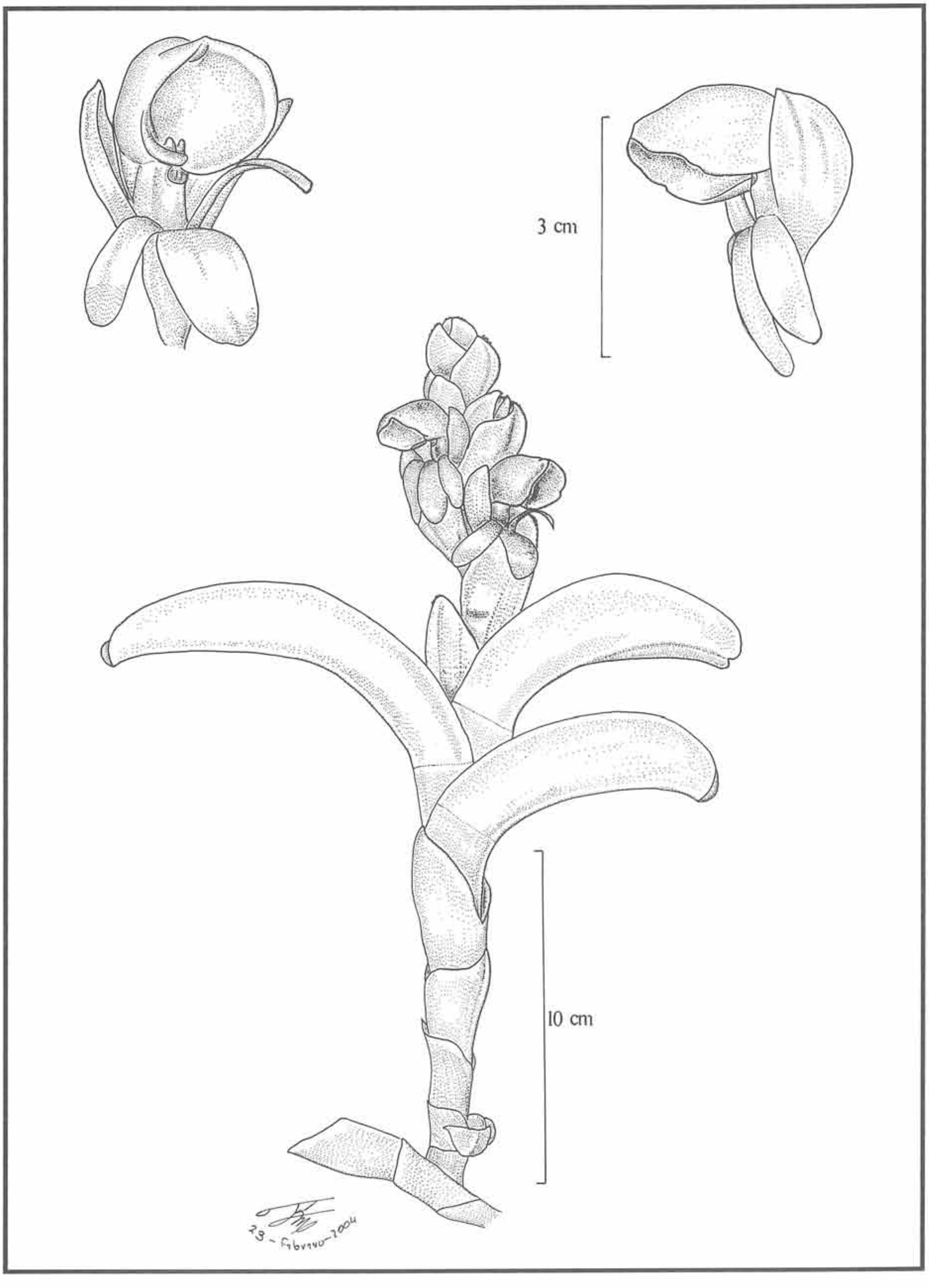
DISTRIBUTION AND ECOLOGY: Known only from cultivated material originally from the Province of Cajamarca in northern Peru. Flowering in July in cultivation in Mexico.

RECOGNITION: *Epidendrum franckei* belongs to the Calanthum Subgroup of the Secundum Group which is characterized by the caespitose habit, simple, terete, stems, numerous, oblong-elliptic, bilobed, leaves, mostly elongate inflorescence, with a raceme of successive flowers, the lip with two calli and a prominent, flexuous keel. The species is recognized by the non-resupinate, pink flowers flowering simultaneously, the apex of the column and calli white, obtuse sepals and petals, the erose petals somewhat wider than the sepals and the lip with large, extended, semiorbicular lateral lobes and a smaller, bifid midlobe. It closely somewhat resembles *Epidendrum denticulatum* which has somewhat acuminate sepals and petals, the petals with non-branching veins and entire margins, the midlobe of the lip proportionately larger, and a white spot on the disc covering more than the calli.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Oscar F. Francke, amateur orchidologist from Mexico City, who provided a keiki of the plant which was then cultivated in the live collection of the AMO herbarium until flowering.



EPIDENDRUM GALEOCHILUM Hágsater & Dressler

Plate 738

EPIDENDRUM GALEOCHILUM Hágsater et Dressler, *sp. nov.*

Type: PANAMA: Coclé: El Copé, April 1978, ***Dressler s.n.*** Color slides, AMO! Holotype: Illustration prepared from slides, AMO! Xerox: AMES! COL! CR! JAUM! K! MO! PMA! SEL!

Epidendro circinato Ames simile sed labello valde concavo fistuliformi vel galeiformi recedit.

Hierba cespitosa, simpodial, de más de 26 cm de alto. **Raíces** no vistas. **Tallos** sencillos, produciendose en la base del tallo anterior, tipo caña, lateralmente aplanados, rectos, gradualmente más anchos hacia el ápice, 15 x 1.2-2.1 cm. **Hojas** 3, distribuidas en la zona apical de los tallos, alternas, dísticas, falcadas; vaina tubular, finamente estriada, 15-42 x 12-21 mm; lámina angostamente elíptica, ápice bilobado, coriácea, lisa, margen entero, 8.5-11.8 x 4.0-4.6 cm. **Brácteas espatáceas** ausentes. **Inflorescencia** apical, racemosa, erecta, compacta, florece una sola vez, 11 cm de largo; pedúnculo corto, oculto en su totalidad por 2 brácteas, muy semejantes a las florales, anchamente obovadas, redondeadas, conduplicadas, margen entero, 3-4 cm de largo. **Brácteas florales** ligeramente más largas que el ovario, obovadas, subagudas, carnosas, conduplicadas, concóloras con la tonalidad de las flores, 18 mm de largo. **Flores** 5, sucesivas, 2 abiertas a la vez, no resupinadas, dísticas y secundifloras, de color verde, concoloras, carnosas; sin datos de fragancia. **Ovario** terete, ensanchado en los 2/3 apicales, oculto casi en su totalidad por la bráctea floral, ca. 15 mm de largo. **Sépalos** libres, redondeados en el ápice, margen entero, 18 x 9 mm; el **dorsal** ligeramente reflexo, oblongo elíptico; los **laterales** entreabiertos, obovados, oblicuos. **Pétalos** libres, extendidos, ligeramente arqueados, oblongos, obtusos, margen entero, 17 x 6 mm. **Labelo** unido a la columna, entero, transversalmente elíptico, profundamente cóncavo, margen entero, 12.5 x 18 mm. **Columna** recta, gruesa, 7 mm de largo. **Clinandrio** reducido, entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** no visto. **Lóbulos laterales del estigma** no visto. **Nectario** no visto. **Cápsula** no vista.

Caespitose, sympodial **herb. Stems** simple, produced from the base of the previous stem, cane-like, laterally compressed, straight, gradually wider towards the apex. **Leaves** 3, distributed towards the apex of the stem, alternate, distichous, falcate; sheaths tubular, minutely striated; blade narrowly elliptic, apex bilobed, coriaceous, smooth, margin entire. **Inflorescence** apical, racemose, erect, compact, flowering only once; peduncle short, totally hidden by two bracts similar to the floral bracts, widely obovate, rounded, conduplicate, margin entire. **Floral bracts** slightly longer than the ovary, obovate, subacute, fleshy, conduplicate, concolor with the color of the flowers. **Flowers** 5, successive, 2 open at one time, non-resupinate, distichous and secund, green, concolor, fleshy. **Ovary** terete, thickened throughout the apical 2/3, nearly totally hidden by the floral bract. **Sepals** free, apex rounded, margin entire; the **dorsal** slightly reflexed, oblong-elliptic; the **laterals** partly spreading, obovate, oblique. **Petals** free, reflexed, oblong, obtuse, margin entire. **Lip** united to the column, entire, transversely elliptic, deeply concave, cannot be spread without tearing, margin entire. **Column** straight, short, thick. **Clinandrium hood** reduced, entire.

OTHER SPECIMENS: None seen.

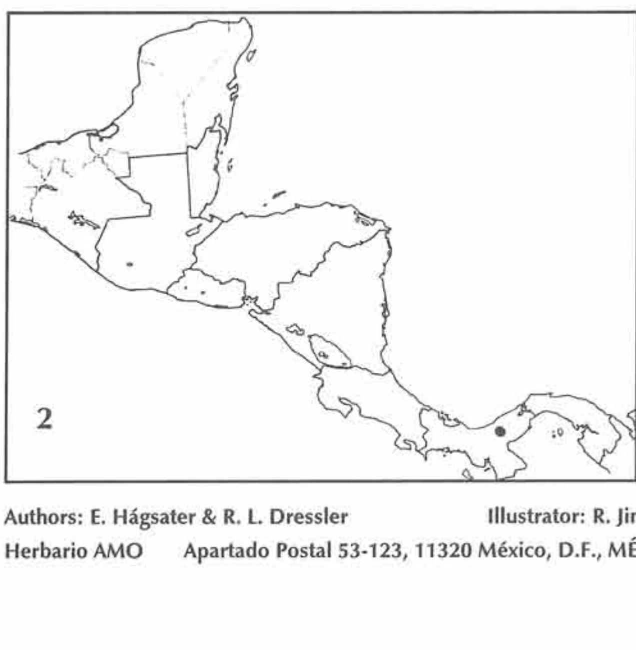
OTHER RECORDS: PANAMA: without data, *Taylor 27*, water color by Sarah M. Clay, 2 February 1978, K!

DISTRIBUTION AND ECOLOGY: Known only from Panama, from around El Copé in the province of Coclé, near the continental divide, somewhere around 800 m altitude. Flowering from February to April, probably longer.

RECOGNITION: *Epidendrum galeochilum* belongs to the Coriifolium (Spathiger) Group, Circinatum Subgroup, which is characterized by the sympodial growth, few, wide leaves, simple, distichous inflorescence with large, conduplicate bracts, large fleshy, non-resupinate, secund flowers, with the lip usually inflexed in front of the column. The species is recognized by the deeply concave lip, which looks like a helmet or pipe and cannot be flattenned without tearing. *Epidendrum circinatum* (syn. *Epidendrum concavilabium* C. Schweinf.) has an obcuneate lip, broader towards the apex than at the base, and inflexed at a 90 degree angle with the axis of the column but otherwise flat. *Epidendrum vexillium* Hágsater has a nearly flat, subrectangular, cordate lip which extends like a flag on the same axis as the column.

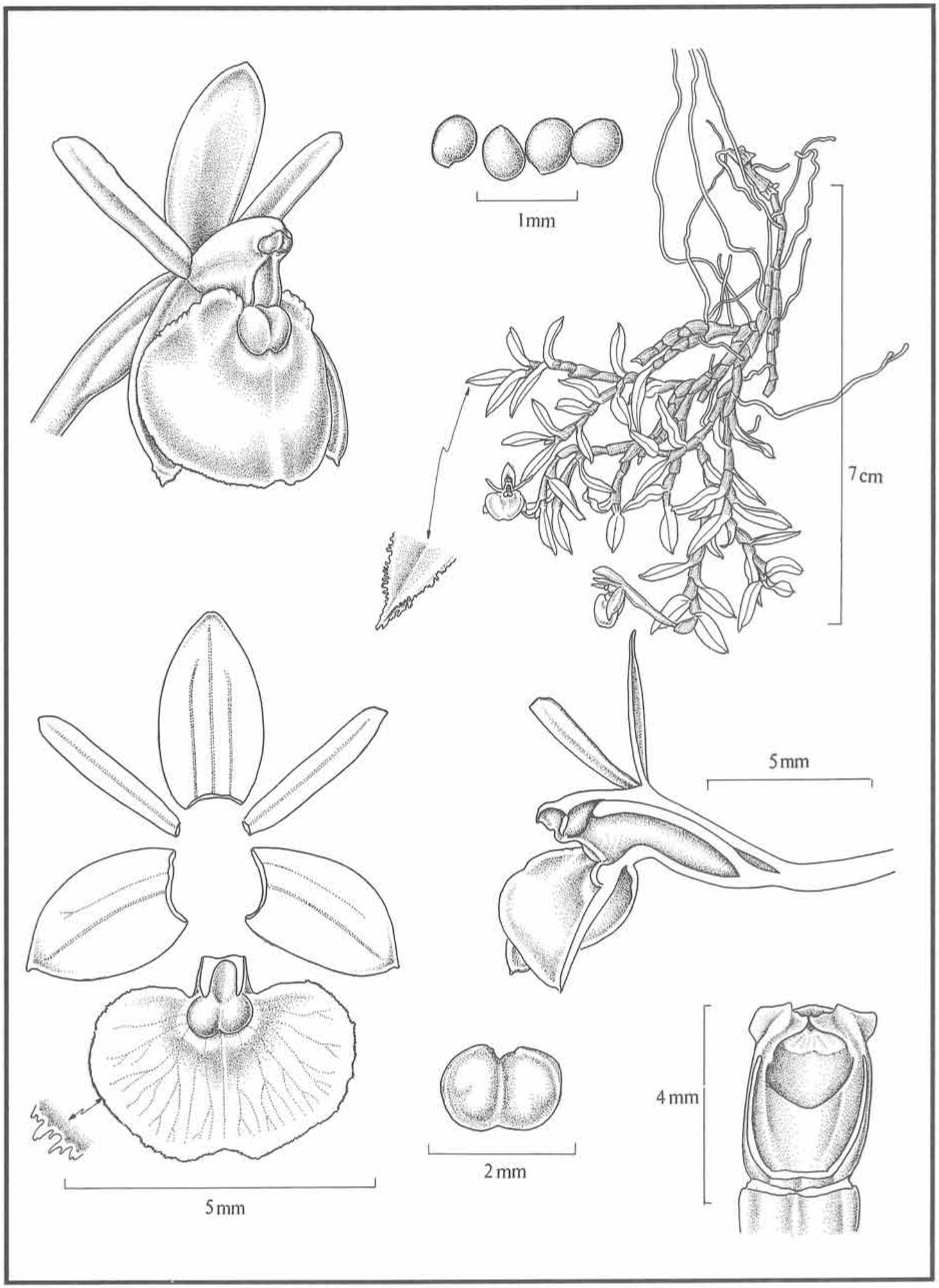
CONSERVATION STATUS: DD. Data deficient. No specimen has been found.

ETYMOLOGY: From the Greek γαλεος- helmet, and χειλος- lip, in reference to the deeply concave, helmet-shaped lip.



Authors: E. Hágsater & R. L. Dressler **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM GNOMOIDES Hágsater

Plate 739

EPIDENDRUM GNOMOIDES Hágsater, *sp. nov.*

Type: PERU: Cuzco: Río Marcapata, 60 km above Quincemil, 1910 m, 17 January 1973, ***Michael T. Madison 998.*** Holotype: AMES! (Illustration voucher).

Epidendro gnomus Schltr. simile sed floribus minoribus, sepalis ovato-ellipticis, petalis oblongis, labello reniformi latiore quam longiore leviter emarginato, nectario elongato discrepans.

Hierba epífita, simpodial, ramificada, rastrera, suberecta, 6-8 cm de largo. **Raíces** de los entrenudos basales del los tallos, delgadas, blancas, 0.2-0.4 mm de grosor. **Tallos** rastreros, en la mitad basal rhizomatosa, suberectos hacia el ápice, simpodiales, ramificados, cortos, tipo caña, delgados, arqueados, buscando una posición vertical o por lo menos horizontal, 25-40 x 0.5-1.4 mm. **Hojas** 5-8, distribuidas en la mitad apical del tallo, alternas, articuladas; vaina infundibuliforme, finamente estriada, 3-6 x 1.4-1.8 mm; lámina lanceolada, algunas oblicuas, ápice agudo, con una quilla dorsal diminuta, margen apical diminutamente ciliado, coriácea, suculenta, 0.7-1.4 x 0.2-0.4 cm. **Bráctea espatácea** 1, oblicuamente obovada, redondeada en el ápice, tubular conduplicada, 3-5 x 4-5 mm. **Inflorescencia** apical, uniflora, sésil, suberecta, 1.5-1.9 cm de largo, incluyendo la flor. **Flores** 1, resupinada, de color ocre, de consistencia cerosa; sin datos de fragancia. **Bráctea floral** oculta totalmente dentro de la espata. **Ovario** filiforme en la base, ligeramente inflado hacia el tercio apical, terete, liso, 12 mm de largo. **Sépalos** extendidos, libres, ovado elípticos, subagudos, margen entero, 3.0-3.2 x 1.7-1.8 mm; el **dorsal** 3-nervado; los **laterales** 2-nervados, oblicuos, diminutamente apiculados. **Pétalos** extendidos, libres, oblongos, obtusos, 1-nervados, margen entero, 2.9 x 0.4 mm. **Labelo** unido de manera oblicua a la columna, entero, reniforme, base ligeramente cordada, margen diminutamente eroso ciliado, ápice ligeramente emarginado, 3 x 5 mm; bicalloso, los callos cortos, esféricos, prominentes. **Columna** ligeramente arqueada, oblicua, libre en el ½ apical, gruesa, ventralmente provista de un par de alas prominentes no involutas que forman una apertura alta y angostamente subdeltoide, 4 mm de largo. **Clinandrio** prominente, sin rebasar el cuerpo de la columna, en forma de embudo, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** ausentes. **Nectario** penetrando ca. 1/3 del ovario, liso, inflado. **Antera** reniforme, 4 locular. **Polinios** 4, lenticulares, semejantes. **Cápsula** no vista.

Epiphytic, simpodial, branching, creeping, suberect **herb. Roots** from the basal internodes of the stems, thin, white. **Stems** sympodial, terete, cane-like, thin, branching, the rhizomatose basal half creeping, suberect thereafter. **Leaves** 5-8, distributed throughout the apical half, alternate, articulate, sheath infundibuliform, minutely striated; blade lanceolate, sometimes oblique, apex acute, with a minute dorsal keel, apical margin minutely ciliate, coriaceous-succulent. **Spathaceous bract** 1, obliquely obovate, rounded at the apex, tubular-conduplicate. **Inflorescence** apical, one-flowered, sessile, suberect. **Flower** 1, resupinate, ochre-colored, waxy. **Floral bract** hidden within the spathaceous bract. **Ovary** filiform at the base, inflated towards the apical half, terete, smooth. **Sepals** spreading, free, ovate-elliptic, subacute, margin entire; **dorsal** 3-veined, **laterals** 2-veined, oblique, minutely apiculate. **Petals** spreading, free, oblong, apex obtuse, 1-veined, margin entire. **Lip** obliquely united to the column, entire, reniform, base slightly cordate, margin minutely erose-ciliate, apex slightly emarginate; bicallose, the calli short, spherical, prominent. **Column** slightly arched, oblique, the apical half free, thick, ventrally with a pair of non-involute wings that form a high, narrow, deltoid aperture. **Clinandrium hood** prominent, without surpassing the body of the column, funnel-shaped, margin entire. **Rostellum** apical, slit. **Nectary** penetrating about 1/3 of the ovary, inflated, smooth. **Anther** reniform, 4-celled. **Pollinia** 4, lentil-shaped, subequal.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from southeastern Peru, from the eastern slopes of the Andes, along the banks of the Río Marcapata, an affluent of the Madre de Dios River, below Marcapata, at 1910 m altitude. Flowering in January.

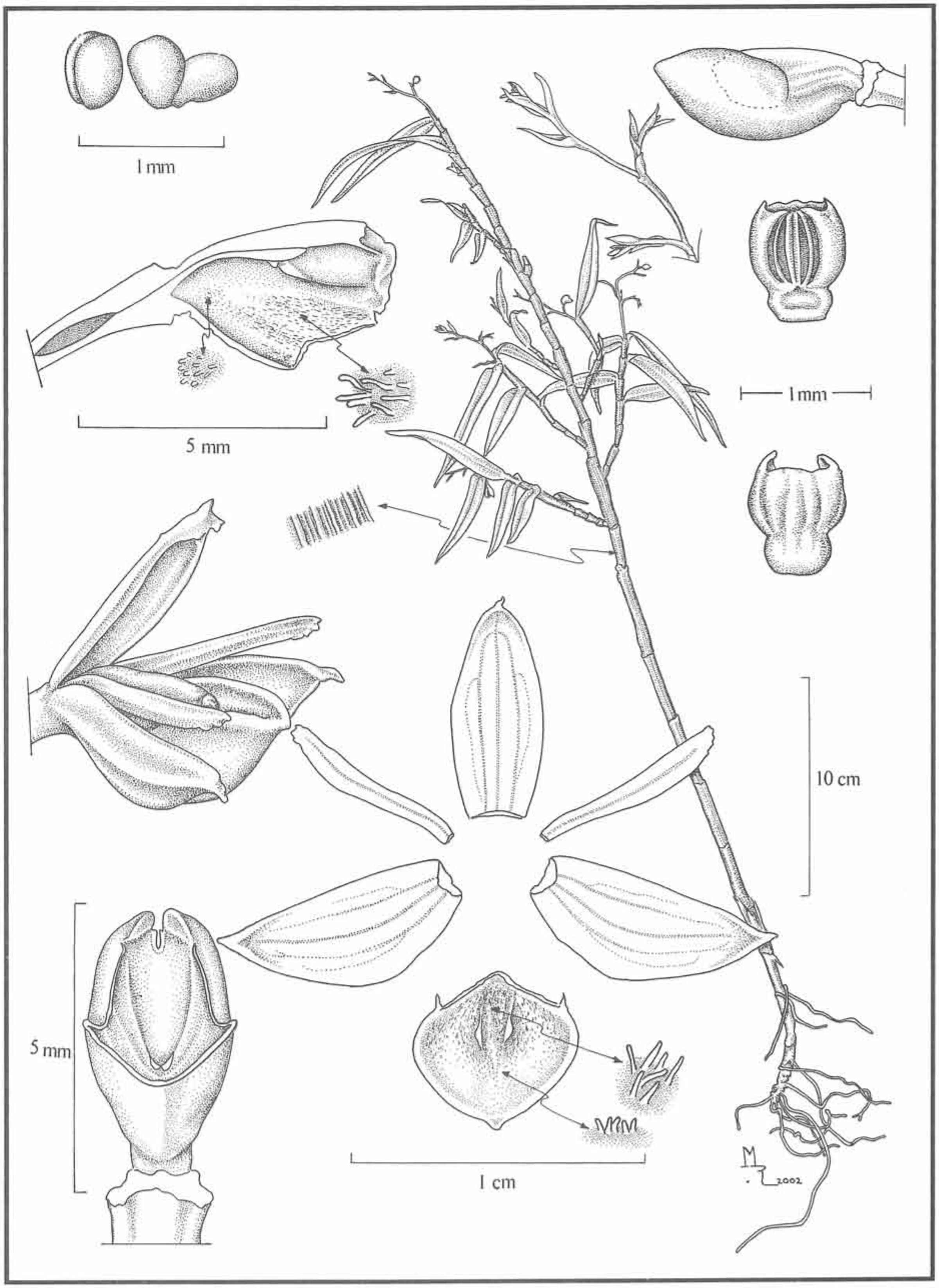
RECOGNITION: *Epidendrum gnomoides* belongs to the Nanodes Group, characterized by the usually small, creeping plants, fleshy succulent leaves, wide-oblique spathaceous bract and solitary or few-flowered, with a fleshy, often shiny, showy lip. The new species is very small, the leaves up to 14 mm long, the ochre flowers 12 mm tall, with ovate-elliptic sepals, and a wide, reniform lip, and an elongate inflated vesicle. *Epidendrum gnomus* has somewhat larger flowers, about 17 mm tall, an ovate lip, longer than wide, a short, nectary forming a globose vesicle near the apex of the ovary, and ovate-triangular sepals. *Epidendrum mathewsii* Rchb. f. which also grows in the region has larger plants, flowers about 20 mm tall, with the lip reniform, convex, 3-keeled with entire margins, and a relatively thin, elongate vesicle.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *gnomus* a dwarf, and the ending *–oideum*, resemblance, in reference to the resemblance between this species and *Epidendrum gnomus*.

Author: E. Hágsater **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM GUARAMACALENSE Hágsater — **Plate 740**

EPIDENDRUM GUARAMACALENSE Hágsater, *sp. nov.*

Type: VENEZUELA: Trujillo; Boconó; Páramo de Guaramacal, 20 km al E de Boconó, 9° 14′ N 70° 11′ W, 2800-3000 m, 26 July 1984, ***Gerardo Aymard, Francisco Ortega & Robbins Morán 2930.*** Holotype: NY! (Illustration voucher). Isotype: PORT.

Epidendro elleanthoide Schltr. simile sed foliis latioribus, floribus majoribus, labello transverse ovato integro, lobulum apicalem triangularem non formanti et anthera pandurata distinguibile.

Hierba terrestre, subcespitosa, erecta, ramificada, 52 cm de alto. **Raíces** basales, delgadas, blancas, 1-1.4 mm de grosor. **Tallos** teretes, producido de unos 5 cm de la base del tallo anterior, ramificados principalmente en la zona media apical, el principal 52 x 0.2-0.45 cm, las ramas cortas a su vez ramificadas, 4.5-10.5 x 0.16-0.3 cm. **Hojas** en el tallo principal caedizas, distribuidas a todo lo largo del mismo, alternas, semejantes en cuanto a forma y tamaño a las de las ramas, en las ramificaciones distribuidas en la mitad apical; vaina tubular, fibrosa con el tiempo, estriada y finamente rugosa, escasamente verrugosa, hasta 3.2 cm de largo; lámina lanceolada, ápice acuminado, carinada dorsalmente, margen entero, 23-74 x 5-8 mm. **Bráctea espatácea** ausente. **Inflorescencia** apical, del tallo principal y de las ramificaciones, florece una sola vez, paniculada, arqueada, hasta 3.7 cm de largo; formada por 2-3 racimos producidos de la primera bráctea floral del racimo anterior; pedúnculo terete, muy delgado, filiforme hacia la base, desprovisto de brácteas, 12 x 0.15-0.6 mm. **Brácteas florales** más largas que el ovario, triangulares, acuminadas, 4-7 mm de largo, la primera siendo la más grande. **Flores** hasta 12, generalmente 3 por racimo, sucesivas, se desarrolla una flor a la vez; resupinadas; de color "amarillo", sin datos de fragancia. **Ovario** corto, terete, delgado, no inflado, no ornamentado, 4-5 mm de largo. **Sépalos** entreabiertos, libres, elípticos, obtusos, diminutamente apiculados, 3-nervados, las nervaduras laterales ramificadas, pareciendo 5-nervados, margen entero; el **dorsal** 7.5 x 3 mm; los **laterales** oblicuos, 8.5 x 3.5 mm. **Pétalos** entreabiertos, libres, lineares, obtusos, 1-nervados, margen en la zona apical eroso, 6.6 x 1 mm. **Labelo** unido a la columna, entero, transversalmente ovado al extenderse, brevemente apiculado, carnoso, en forma de copa, abrazando parcialmente a la columna en posición natural, sin traslaparse por encima, 5 x 5.6 mm; pubescente, bicalloso, los callos basales, pequeños y delgados. **Columna** corta, gruesa, ligeramente arqueada, 4.6 mm de largo. **Clinandrio** reducido, entero. **Antera** pandurada, 4-locular. **Polinios** 4, obovoides. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** cortos de ¼ del largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, amplio, pubescente. **Cápsula** no vista.

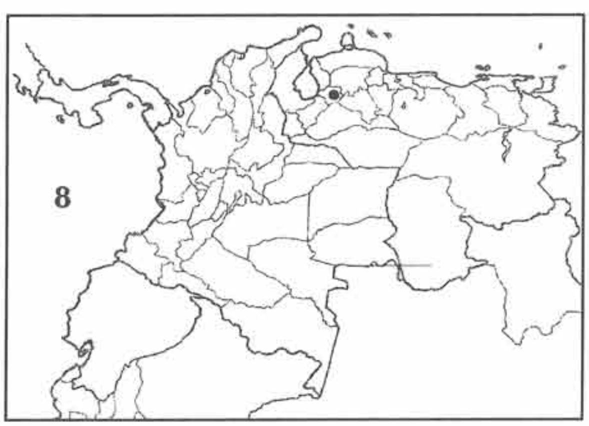
Terrestrial, subcaespitose, erect, branching **herb. Roots** basal, thin. **Stem** arising near the base of the previous stem, branching above the middle, branches short, and themselves branching. **Leaves** distributed throughout the main stem and along the upper half of the branches; sheath finely striated, somewhat rugose and sparsely verrucose; blade lanceolate, acuminate, dorsally carinate, margin entire. **Inflorescence** apical, from the main stem and branches, flowering only once, paniculate, arching; formed by 2-3 racemes, each new raceme produced from the first floral bract of the previous raceme, peduncle terete, very thin, filiform towards the base. **Floral bracts** longer than the ovary, triangular, acuminate. **Flowers** generally 3 per raceme, successive, one developing at a time, resupinate, "yellow". **Sepals** partly spreading, elliptic, obtuse, minutely apiculate, 3-veined, the lateral veins branching so as to appear 5-veined, margin entire; the **laterals** oblique. **Petals** partly spreading, free, linear, obtuse,1-veined, the apical margin erose. **Lip** united to the column, transversely ovate when spread, short-apiculate, cup-shaped, embracing the lip without overlapping; pubescent, bicallose, the calli small, narrow. **Column** short, thick, slightly arching. **Clinandrium hood** reduced, entire. **Anther** pandurate, 4 celled. **Pollinia** 4, obovoid. **Rostellum** apical, slit. **Nectary** not penetrating the ovary, wide, pubescent.

NOTE: The plant architecture, appears to correspond to a relatively young plant, flowering for the first time. Older plants could have a more straggling habit, with longer, thinner branches as are typical of the Elleanthoides Group.

OTHER SPECIMENS: None seen.

RECOGNITION: *Epidendrum guaramacalense* belongs to the Elleanthoides Group which is characterized by the branching habit, thin stems, the grassy leaves and the arching inflorescence with short hair-like peduncles and few, successive flowers. The species is recognized by the relatively wide and long leaves (up to 74 x 8 mm), relatively large flowers (for the group, sepals 7.5-8.5 mm long), the entire, transversely wide, ovate lip, pubescent with two small, narrow calli, and the pandurate anther. *Epidendrum elleanthoides* Schltr. has narrower leaves (to 4 mm), smaller flowers (sepals 3-4 mm long) and the lip is shallowly 3-lobed, with the apical lobe triangular and nearly as large as the lateral lobes. *Epidendrum guacamayense* Hágsater & Dodson has leaves up to 6 mm wide, sepals 7.5 mm long, and the lip embracing the column, overlapping and completely hiding it. *Epidendrum bryophilum* Hágsater & Dodson has 3 mm wide leaves with the apical margin sinuous-dentate, 6 mm long sepals, and up to 13 flowers per raceme. *Epidendrum piconeblinaënse* Hágsater has smaller leaves (16-46 x 2-5 mm), a rhombic, pubescent lip, and narrower, oblong petals; it is found in southern Venezuela near the border with Brazil.

DISTRIBUTION AND ECOLOGY: Known only from the type, in Andean *páramo* in northwestern Venezuela, at around 2800-3000 m altitude. Flowering in July.

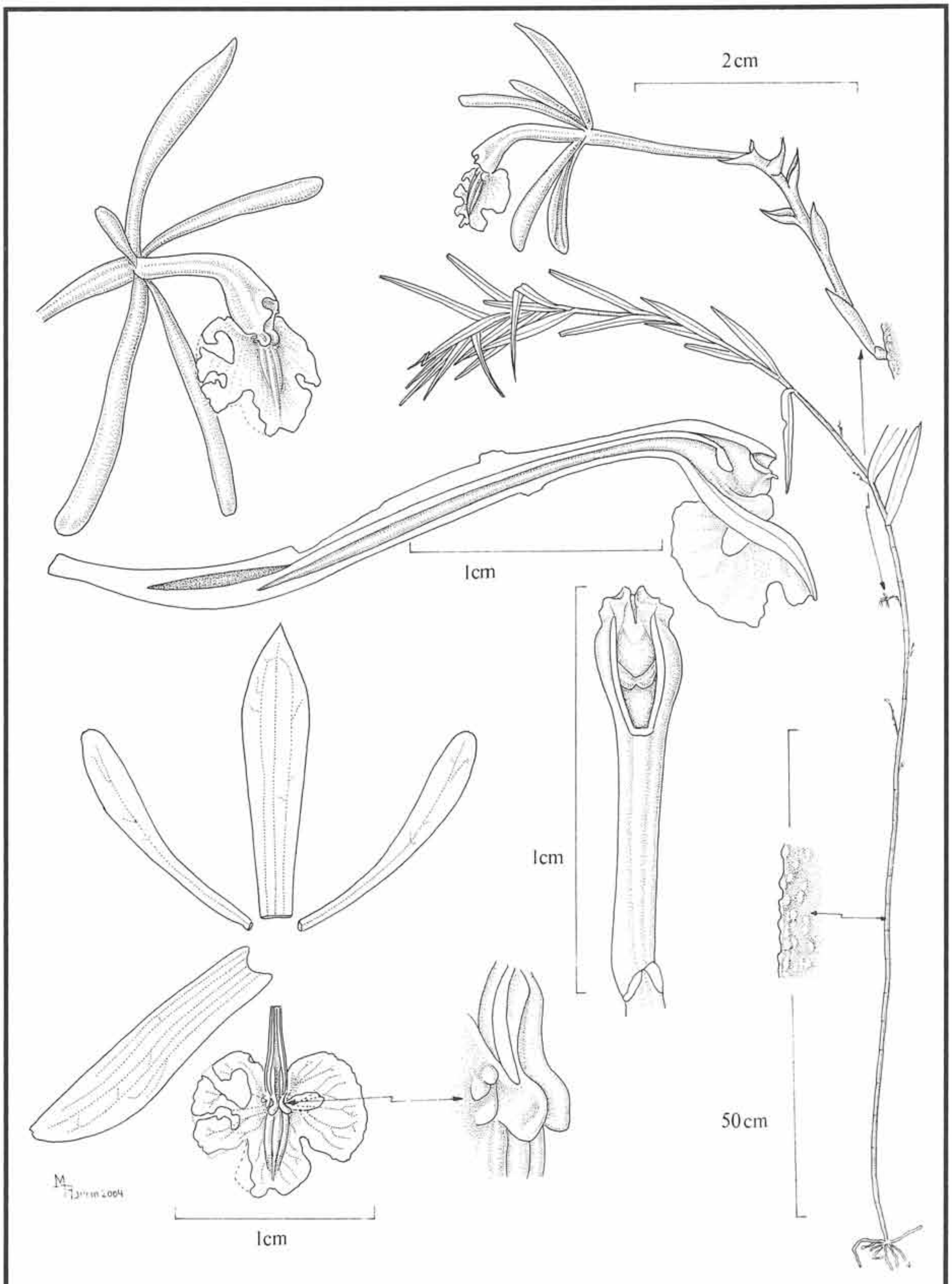


CONSERVATION STATUS: DD. Data deficient. The type was collected in or near the Guaramacal National Park.

ETYMOLOGY: In reference to the locality where the type was collected, the Páramo de Guaramacal.

Authors: E. Hágsater & E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM GYMNOPODUM Hágsater

Plate 741

EPIDENDRUM GYMNOPODUM Hágsater, *sp. nov.*

Type: PANAMA: Darién: Parque Nacional del Darién Ridge between N & S branches of Río Púcuro, across river from old Kuna village of Tacarcuna; ca. 18 km E of Púcuro, 8°04′ N 77°16′ W, 600-1000 m, 21 October 1987, ***B. Hammel, G. de Nevers, H. Cuadros & H. Herrera 16342.*** Holotype: MO! (Illustration voucher).

Epidendro phyllocharis Rchb.f. simile sed foliis longis angustis et acutis, inflorescentia laterali gracili, non omnino cum bracteis imbricatis tegenti, labello trilobato recedens.

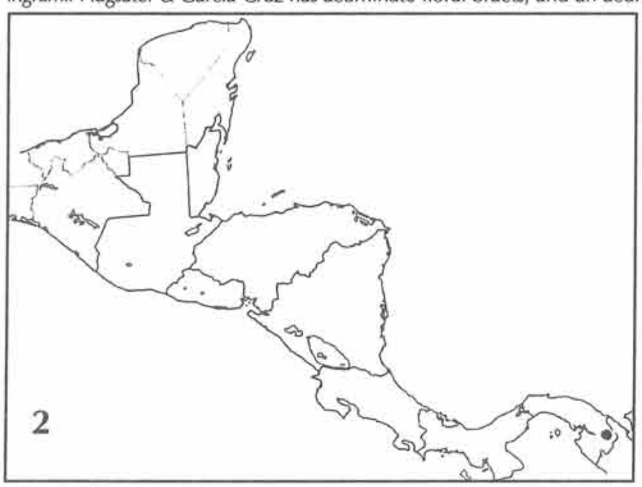
Hierba epífita, simpodial, cespitosa, de 130 cm de alto. **Raíces** basales, carnosas, delgadas, blancas, 0.6-2.3 mm de grosor. **Tallos** sencillos, tipo caña, teretes, delgados, rectos, 130 x 0.34-0.65 cm. **Hojas** ca. 35, distribuidas en la mitad apical del tallo, articuladas, alternas, gradualmente más pequeñas hacia el ápice; vaina tubular, finamente estriada, verrugosa, 17-42 x 3.4-6.5 mm; lámina lanceolada, acuminada, subcoriácea, margen entero, ligeramente revoluto, 8-18 x 0.7-2.0 cm. **Bráctea espatácea** ausente. **Inflorescencias** laterales, numerosas, racemosas, 1.5-2.0 cm de largo; pedúnculo terete, delgado, corto, 6-9 mm de largo; generalmente desnudo, en ocasiones con 3 brácteas tubulares, imbricadas, redondeadas, de 2-3 mm de largo. **Brácteas florales** mucho más cortas que el ovario; triangulares, agudas, abrazadoras, 3-4 mm de largo. **Flores** 4-5 por racimo, sucesivas, resupinadas, blancas; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 17 mm de largo. **Sépalos** libres, extendidos, agudos, margen entero, 14.5 x 3.5 mm; el **dorsal** oblanceolado, 3-nervado; los **laterales** oblongos, oblicuos, 5-nervados. **Pétalos** libres, entreabiertos, linear espatulados, unguiculados, ápice redondeado, 1-nervados, margen entero, 13 x 1.7 mm. **Labelo** unido a la columna, trilobado, cordado, margen irregular eroso, 7.2 x 8.7 mm; bicalloso, los callos, laminares, ligeramente divaricados en el ápice; disco provisto de tres quillas lisas, delgadas, subagudas, que se desvanecen antes de llegar al ápice del lóbulo medio, con un par de protuberancias esféricas diminutas y con una protuberancia laminar muy corta, al lado de los callos; lóbulos laterales semiorbiculares, 4.2 x 5.5 mm; lóbulo medio anchamente rhomboide, ápice anchamente emarginado, con un apículo diminuto en el seno, 3.0 x 3.7 mm. **Columna** arqueada a los 2/3 apicales, delgada en sus 2/3 basales, 10 mm de largo. **Clinandrio** corto, margen entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de 1/3 del largo de la cavidad estigmática. **Nectario** penetrando la ½ del ovario, delgado, no inflado, liso. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb. Roots** basal, fleshy, thin. **Stem** simple, cane-like, terete, straight. **Leaves** ca. 35, distributed throughout the apical half of the stem, articulate, alternate, gradually smaller; sheath tubular, minutely striated and verrucose; blade lanceolate, acuminate, margin entire, slightly revolute, subcoriaceous. **Inflorescence** lateral, numerous, racemose, short,; peduncle terete, thin, short, usually bare, sometimes with 3 short, tubular, rounded, imbricating bracts. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** 4-5 per raceme, successive, resupinate, white. **Ovary** terete, thin. **Sepals** free, spreading, acute, margin entire; the **dorsal** oblanceolate, 3-veined; the **laterals** oblong, oblique, 5-veined. **Petals** free, partly spreading, linear-spathulate, unguiculate, apex rounded, 1-veined, margin entire. **Lip** united to the column, 3-lobed, cordate, margin irregular-erose; bicallose, the calli laminar, the apex divaricate; disc provided with 3 smooth, laminar keels, which disappear before reaching the apex of the midlobe, with a pair of minute spherical bulges and a laminar bulge on each side of the calli; lateral lobes semiorbicular; midlobe widely rhomboid, the apex widely emarginate and minutely apiculate in the sinus. **Column** arching at the apical 2/3, thin below. **Clinandrium hood** short, margin entire. **Nectary** penetrating half the ovary, smooth.

OTHER SPECIMENS: None seen.

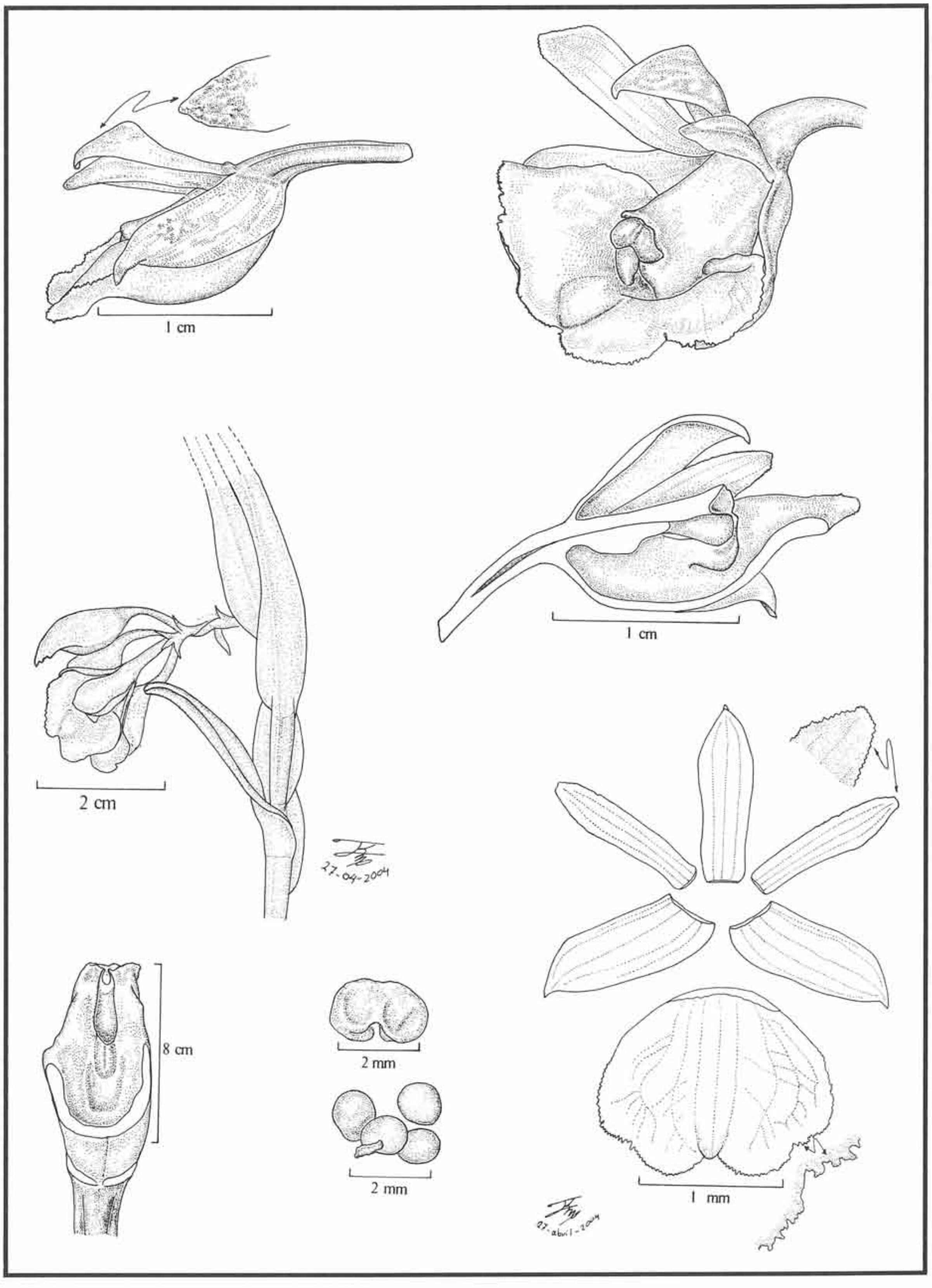
DISTRIBUTION AND ECOLOGY: Known only from eastern Panama, on the border with Colombia, on the ridge of the Darien Range, growing epiphytic, between 600 and 1000 m altitude. Flowering in October.

RECOGNITION: *Epidendrum gymnopodum* belongs to the Allenii Group, Albertii Subgroup which is characterized by the caespitose habit, with numerous, purple-colored leaves, the laterally flattened stems with apical and lateral inflorescences, the apical one with an ancipitose peduncle terminating in a conduplicate spathaceous bract somewhat larger but similar to the floral bracts, and one to several racemes of imbricating, conduplicate, rounded, bracts which produce one flower at a time. The species is recognized by the long, narrow leaves, subsessile lateral inflorescences with a very thin and short peduncle, usually bare, but sometimes with short, rounded, imbricating bracts, the long, narrow, spreading tepals, and the 3-lobed lip, with an erose margin, the column long, thin and arching at the apical 2/3 point, the flowers white. It is very similar florally to *Epidendrum phyllocharis* which has shorter, wider leaves, the peduncle of the inflorescence completely covered by imbricating bracts, and the entire, cordiform, trullate-truncate, more or less hexagonal lip with an entire margin, the flowers white or cream tinged with pinkish bronze. *Epidendrum hexagonum* Hágsater & Dodson has the same general characters, but the plants and flowers are green and larger. *Epidendrum albertii* Schltr. Also has large flowers, but the lip is acute, entire. *Epidendrum ingramii* Hágsater & García-Cruz has acuminate floral bracts, and an acuminate lip, the flowers greenish tinged with purple. *Epidendrum brachypodum* Hágsater has a sessile apical inflorescence and sepals and petals twice as wide, the sepals elliptic, the petals spathulate-obtrullate with the lateral veins branched from the base.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek γυμνος- naked, unclad, and ποδιον- foot, in reference to the bare peduncle of the lateral inflorescence, which characterizes this species. Most species in this Group have the peduncle completely covered by imbricating bracts.



EPIDENDRUM HEMIHENOMENUM Hágsater & Dodson Plate 742

EPIDENDRUM HEMIHENOMENUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Bajando del puerto de Zamora a Loja, ca. 1 km abajo del puerto, 3°59'08"S 79°05'35"W, 3000 m, 28 January 2004, ***E. Hágsater & Lester Lapo 14070.*** Holotype: The illustration herewith published. Original, AMO! Xerox copies: AMES! LOJA! MO! QCA! QCNE! SEL! USM!

Epidendro cleistocoleo Hágsater & E. Santiago simile sed floribus brunneo-rubellis, sepalis ad apicem dorsaliter rugosis, petalis oblongis, labello carinis et venis incrassatis carenti, columna connata in labelli dimidio basali differens.

Hierba epífita, erecta. **Raíces** no vistas. **Tallos** originándose de los entrenudos apicales del tallo anterior, tipo caña, teretes, delgados, rectos, teñidos de púrpura, 0.6 cm de grosor. **Hojas** numerosas, distribuidas a lo largo del tallo, 5 persistentes hacia el ápice del tallo, articuladas, dísticas, subcoriáceas; vaina tubular, finamente estriada, 22 x 6 mm; lámina linear lanceolada, ápice redondeado, diminutamente bilobado, con una quilla dorsal diminuta, dorsalmente de color verde claro, la superficie ventral con difuminaciones purpúreas, margen entero, 5-6.5 x 0.9-1.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueada nutante, florece una sola vez, 2.5 cm de largo; pedúnculo corto, terete, delgado. **Brácteas florales** más cortas que el ovario, triangulares, agudas, 4 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 9 mm de largo. **Flores** 9, resupinadas, sucesivas, estando abiertas hasta 4 de manera simultánea, abriendo de la base hacia el ápice de la inflorescencia, carnosas, pardo rojizas; sin datos de fragancia. **Sépalos** entreabiertos, libres, subagudos, diminutamente apiculados, rugosos en el ápice de la superficie dorsal, margen entero, 12-12.2 x 3.6-4.4 mm; el **dorsal** oblongo oblanceolado, 3-nervado; los **laterales** oblongo elípticos, 5-nervados, oblicuos. **Pétalos** entreabiertos, libres, oblongos, redondeados, 3-nervados, margen apical eroso, 11 x 2.5 mm. **Labelo** unido a la mitad basal de la columna, entero, transversalmente elíptico, ápice anchamente mucronado, 4-lobado, los lóbulos redondeados, el par externo más corto que el par interno, base ampliamente cuneada, margen eroso, 12.7 x 16 mm; ecalloso, desprovisto de quillas. **Columna** libre en la mitad apical, recta, gruesa, 8 mm de largo. **Clinandrio** corto, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 del largo de la cavidad estigmática. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides; caudículas suaves y granulosas, cortas. **Nectario** corto, sin penetrar el perianto, amplio, no ornamentado. **Cápsula** no vista.

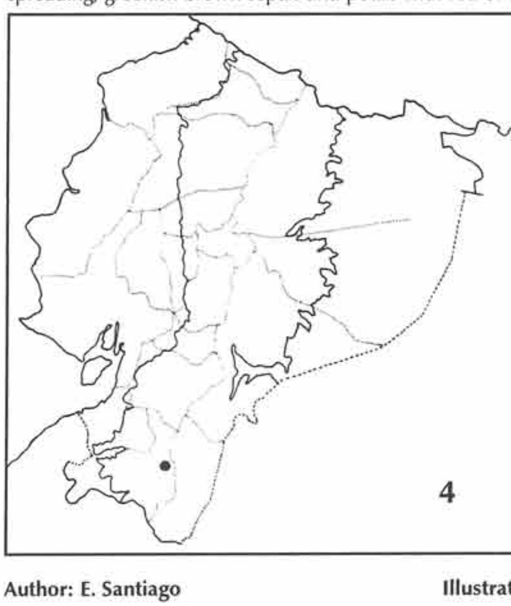
Epiphytic, erect, **herb. Stems** originating from the upper internodes of the previous stem, cane-like, terete, thin, straight, tinted purple. **Leaves** numerous, distributed throughout the stem, 5 persistent towards the apex of the stem, articulate, distichous, subcoriaceous; sheath tubular, minutely striated; blade linear-lanceolate, apex rounded, minutely bilobed, with a minute dorsal keel, dorsally light green, ventrally tinged purple, margin entire. **Inflorescence** apical, racemose, short, arching-nutant, flowering only once; peduncle short, terete, thin. **Floral bracts** shorter than the ovary, triangular, acute. **Ovary** terete, thin, smooth. **Flowers** 9, resupinate, successive, 4 open at one time, fleshy, reddish brown. **Sepals** partly spreading, subacute, minutely apiculate, dorsally rugose towards the apex, margin entire; the **dorsal** oblong-lanceolate, 3-veined; the **laterals** oblong-elliptic, oblique, 5-veined. **Petals** partly spreading, free, oblong, rounded, 3-veined, apical margin erose. **Lip** united to the basal half of the column, entire, transversely elliptic, apex widely mucronate, 4-lobed, the lobes rounded, the outer pair shorter than the inner pair, base widely cuneate, margin erose; ecallose, without keels. **Column** basal half united to the lip, straight, thick. **Clinandrium hood** short, margin entire. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid; caudicles soft and granulose, short. **Nectary** short, wide, smooth.

OTHER SPECIMENS: None seen.

OTHER RECORDS: ECUADOR: Loja: Zamora a Loja, bajando del puerto, 3000 m, 28 I 2004, *Hágsater 14070,* digital photo at AMO! spirit AMO!

DISTRIBUTION AND ECOLOGY: Known only from the type locality, a roadside bank recently colonized by various orchid species, on the upper western slope, east of Loja, at about 3000 m altitude. Flowering in January.

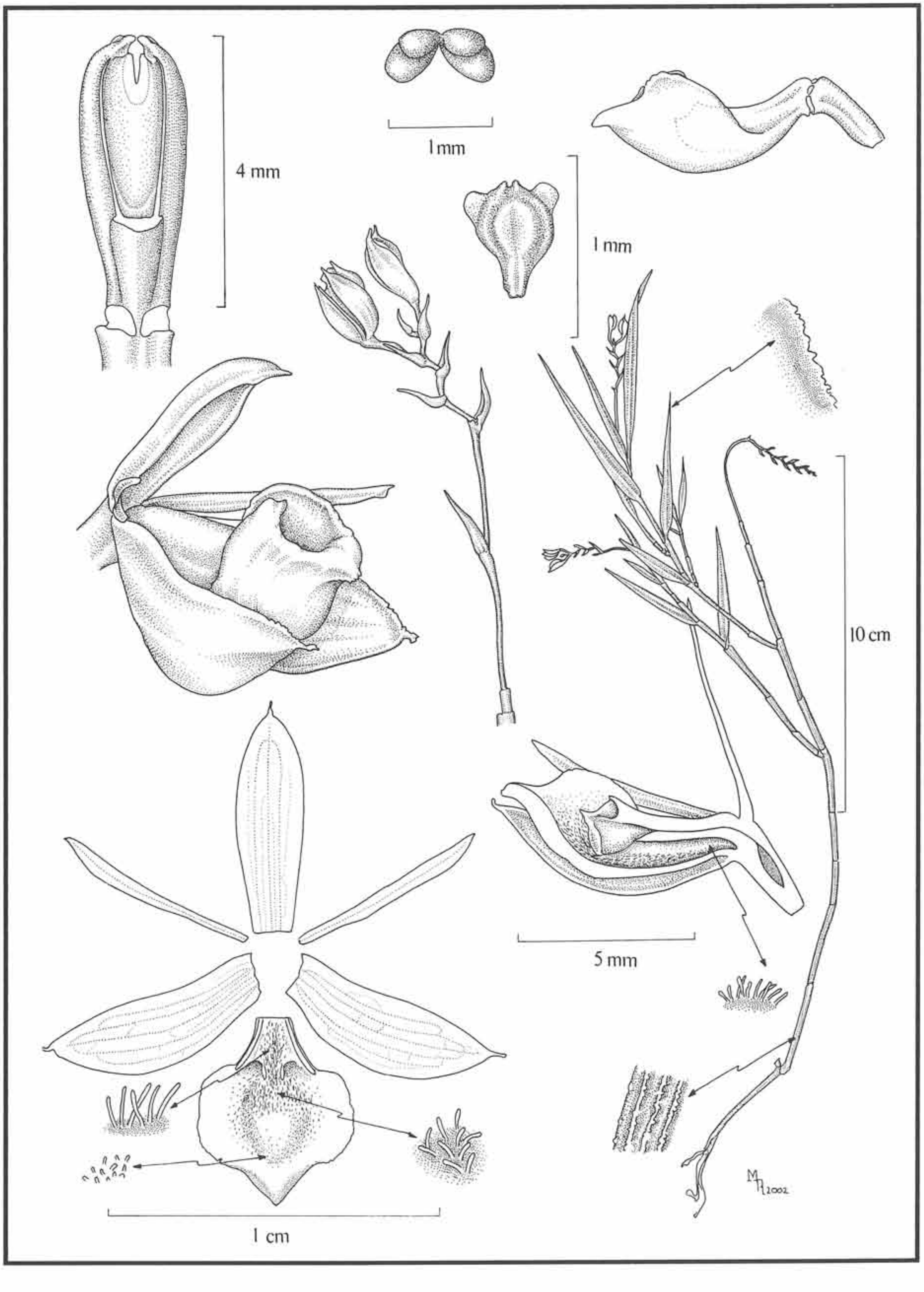
RECOGNITION: *Epidendrum hemihenomenum* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose,with or without 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The species has short inflorescences, 2.5 cm long, fleshy flowers, sepals and petals partly spreading, reddish brown, sepals apically and dorsally rugose, petals oblong, lip transversely elliptic, without keels, base widely cuneate, the apex mucronate, 4-lobed and the column only united along the basal half to the lip. It is similar to *Epidendrum cleistocoleum* which has spreading, greenish brown sepals and petals with red or reddish dots and the lip deep red to purple, the sepals dorsally smooth, petals linear-lanceolate, the lip has multiple thickened veins and is not mucronate, and the column is free with a pair of rounded wings at the base. *Epidendrum aureoglobiflorum* Hágsater & Dodson has a short inflorescence, 1 cm long, greenish yellow sepals, yellow petals and lip, the sepals dorsally with reddish brown warts, petals oblong-lanceolate, lip subreniform with the base deeply cordate, and the column obliquely united to the lip. *Epidendrum ardens* Kraenzl. of the Scabrum Group, Soratae Subgroup, has somewhat similar flowers, though these are scarlet red, orange or rarely reddish brown, longer inflorescences, 5-7.5 cm long, sepals are dorsally papillose, petals linear, lip reniform, deeply cordate at the base, bicallose, and the column is totally united to the lip.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek ημι- half, and ηνωμενος- united, half-united, in reference to the column and lip which are united along the basal half.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM HESPERIUM Hágsater & E. Santiago

Plate 743

EPIDENDRUM HESPERIUM Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Antioquia: Carretera Briseño, El Oro, 1720 m, 01 Jun. 1975, ***Gilberto Escobar 1208.*** AMES! (Illustration voucher).

Epidendro elleanthoide Schltr. simile sed inflorescentia plerumque racemosa usque ad 15 flores ferenti, floribus majoribus, columna leviter incurvata recedens.

Hierba ramificada, de más de 27 cm de alto. **Raíces** basales, delgadas, blancas, 0.5 mm de grosor. **Tallos** ramificados, teretes, delgados, de más de 27 x 0.17 cm; las ramas más cortas 3.5-7 x 0.1-0.15 cm. **Hojas** del tallo principal no vistas, 3-5 en las ramificaciones, distribuidas hacia la mitad apical de los tallos; vaina tubular, estriada y verrugosa, 0.9-1.8 x 0.1-0.15 cm; lámina angostamente lanceolada, carinada dorsalmente, ápice agudo, margen entero en la base y diminutamente crenado en el ápice, ligeramente revoluto, 2.0-6.6 x 0.24-0.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa a raramente paniculada, dística, erecta o arqueada, hasta 5 cm de largo; pedúnculo corto, terete, filiforme, liso, 5-19 mm de largo; provisto en la zona apical de una bráctea triangular, acuminada, 5 mm de largo; raquis en zigzag, 15-37 mm de largo. **Brácteas florales** casi tan largas como el ovario, gradualmente más pequeñas hacia el ápice, triangulares, acuminadas, 2-5 mm de largo. **Flores** hasta 15, sucesivas, dísticas, rojizas por fuera, verde pálido por dentro, sin datos de fragancia. **Ovario** corto, terete, delgado, no inflado, no ornamentado, 2 mm de largo. **Sépalos** entreabiertos, libres, redondeados, apiculados, 3-nervados, las nervaduras muy ramificadas desde la base, dando la apariencia de ser 6-nervados, margen entero, 7 x 2.2 mm; el **dorsal** angostamente obovado; los **laterales** angostamente elípticos, oblicuos. **Pétalos** entreabiertos, libres, linear oblanceolados, agudos, 1-nervados, margen entero, 6.3 x 0.6 mm. **Labelo** unido a la columna, entero, carnoso, suborbicular al extenderse, ápice triangular, margen basal irregular, 4.2 x 4.6 mm; bicalloso, los callos basales, muy pequeños, delgados, disco pubescente en la base y papiloso cerca del ápice. **Columna** corta, gruesa, ligeramente incurvada, (arqueada hacia arriba), levemente geniculada en la base respecto del ovario, 4 mm de largo. **Clinandrio** reducido, entero. **Antera** ovoide, las esquinas basales con un par de lóbulos redondeados y 2 cornículos redondeados interlobulares, ápice alargado, truncado, 4-locular. **Polinios** 4, obovoides, desiguales, el par exterior (superior) reducido. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** sin traspasar el perianto, no inflado, ventralmente pubescente a todo lo largo. **Cápsula** no vista.

Branching **herb. Roots** basal, thin. **Stems** branching, terete, thin. **Leaves** distributed throughout the apical half of the stems; sheaths striated and verrugose; blade narrowly lanceolate, dorsally carinate, apex acute, margin minutely crenate, slightly revolute. **Inflorescence** apical, racemose to rarely apiculate, occasionally 1-branched, erect or arching; peduncle short, hair-like, with an acuminate bract near the apex, rachis zigzag. **Floral bracts** nearly as long as the ovary, gradually shorter, triangular, acuminate. **Flowers** up to 15, successive, distichous, reddish outside, pale green inside. **Ovary** short, terete, thin. **Sepals** partly spreading, free, narrowly elliptic, rounded, apiculate, 3-veined, the lateral veins branching from the base, margin entire; the **laterals** oblique. **Petals** partly spreading, free, linear-oblanceolate, acute, 1-veined. **Lip** united to the column, entire, fleshy, suborbicular when spread, apex triangular, basal margin irregular; bicallose, the calli basal, very small and narrow, disc pubescent at base and papillose towards the apex. **Column** short, thick, slightly incurved (arched upwards), somewhat geniculate at base in relation to the ovary. **Clinandrium hood** reduced, entire. **Anther** ovoid, with a pair of rounded lobes at the basal corners, and a pair of horns at the base, 4-celled. **Pollinia** 4, obovoid, laterally compressed, unequal, the outer (top) pair reduced. **Rostellum** apical, slit. **Nectary** not penetrating the ovary, the ventral surface pubescent.

OTHER SPECIMENS: COLOMBIA Antioquia: Frontino, Nutibara, 1780 m, 23 IX 1987, *Sánchez 1594*, COL! Guatapé, 1880 m, 01 V 1976, *Ortiz V. 882*, HPUJ! **Chocó:** San José del Palmar, Cerro del Torrá, 1920-1950 m,8 VIII 1988, *Silverstone 4237*, AMO! CUCV! MO!

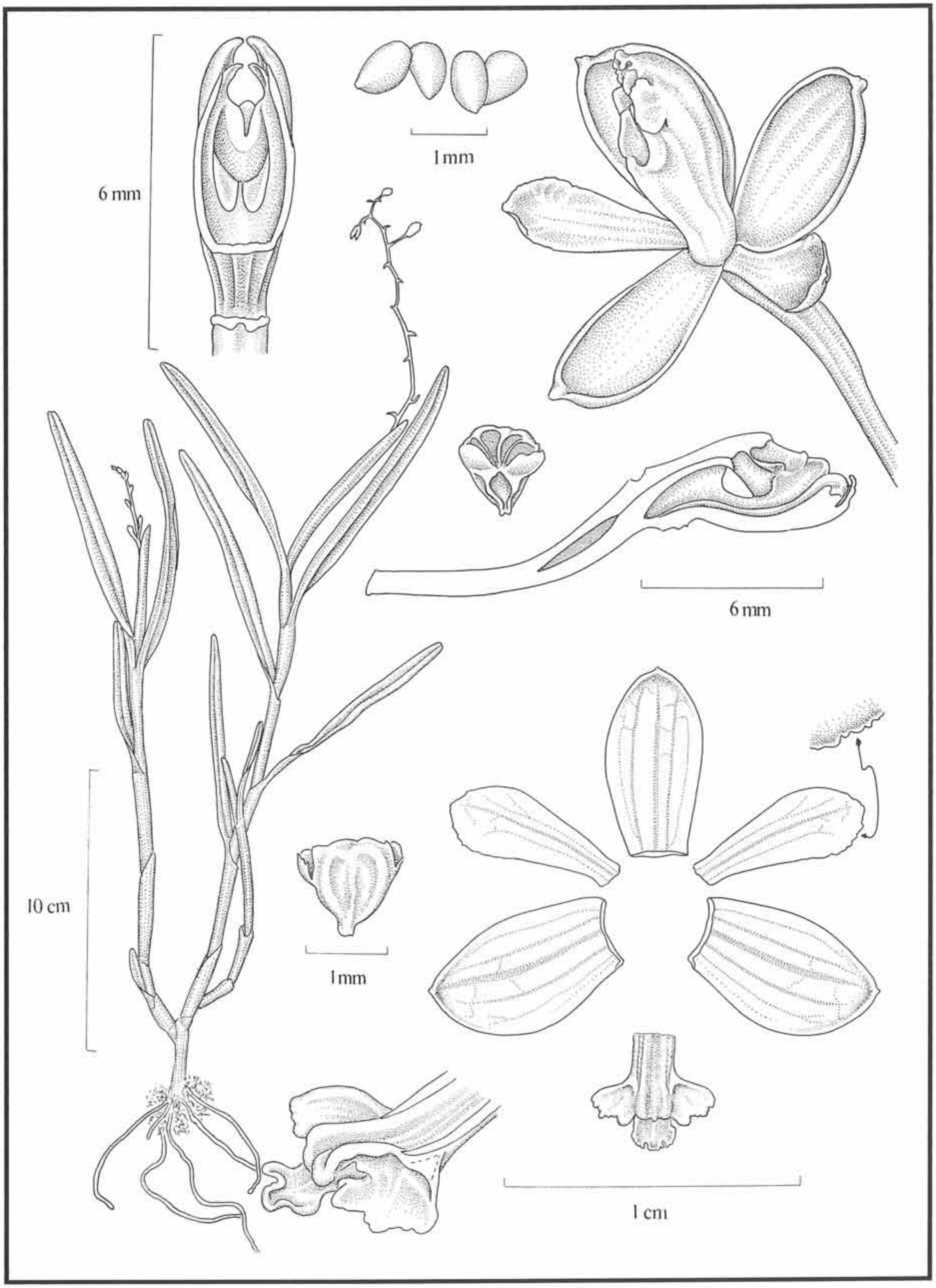
DISTRIBUTION AND ECOLOGY: Known only from the páramos and canyons of north-western Colombia, on the Cordillera Occidental in the provinces of Antioquia and Chocó, at an altitude of 1720-1950 m. Flowering recorded from May to september. Often growing among bushes in humid places.

RECOGNITION: *Epidendrum hesperium* belongs to the Elleanthoides Group which is recognized by the branching habit, the grass-like leaves and the distichous inflorescence with a zigzag rachis and filiform peduncle, the flowers fleshy, the lip cup-shaped and often embracing to overlapping over the column. The new species is recognized by the generally racemose inflorescence with up to 15 flowers, 7 mm long sepals, the long, narrow leaves, the entire lip about as long as it is wide and somewhat overlapping over the column. It is similar to *Epidendrum triodon* Hágsater & Dodson, which has a three dentate lip, the leaves half as long and wider, and the peduncle short and not filiform. The inflorescence is reminescent of *Epidendrum bryophilum* Hágsater & Dodson, which has the flowers quite distinct, with the column shorter and arching downwards, the nectary wider and the lip not overlapping above the column. *Epidendrum elleanthoides* Schltr. has smaller flowers, with sepals less than 5 mm long, the lip is transversely elliptic, and the column is straight. *Epidendrum campylostele* Hágsater & R. Vásquez also has an incurved column, but the floral bud is foot-like, with a prominent heel, and the sepals falcate, the stigmatic cavity proportionately occupies most of the ventral surface of the column, the inflorescence is generally paniculate, each raceme with 2-4 flowers.

CONSERVATION STATUS: DD. Data deficient. Apparently widespread in western Colombia.



ETYMOLOGY: Hesperius, from the Greek εσπερος- western, the evening star, in reference to the Central and Western cordilleras of the Andes, where the species grows in northern Colombia.



EPIDENDRUM HITCHCOCKII Hágsater & Dodson

Plate 744

EPIDENDRUM HITCHCOCKII Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: [Pichincha]: From Soderstrom's Garden, 17 August 1923, ***A. S. Hitchcock 21937.*** Holotype US! (Illustration voucher). Isotype: NY!

Epidendro microglosso Schltr. simile sed inflorescentiis brevioribus, labelli lobulis subquadratis crenatis, floribus purpureis fere nigris, labello albo tricalloso discrepans.

Hierba simpodial, rastrera, epífita, 20-32 cm de alto. **Raíces** de la base de cada tallo, gruesas, carnosas, 2-3 mm de grosor. **Tallo** producido de los nudos inferiores del tallo anterior, a 2-3 cm arriba de la base, 1-2 por tallo; tipo caña, erectos, rectos, teretes, 13-17 x 0.2-0.3 cm. **Hojas** 3-5 por tallo, distribuidas en el tercio apical del tallo, cubierto en la base por 2 vainas no foliosas, escariosas, iguales a las foliares, estriadas y finamente rugosas en seco, 1.5-3 x 0.3-0.4 cm; lámina linear lanceolada, ápice obtuso, bilobado, aristado, margen hialino, entero, 5-11 x 0.6-0.8 cm. **Bráctea espatácea** 1, ancipitosa, oblonga, aguda, 5.0-6.5 x 0.2–0.3 cm. **Inflorescencia** apical, racemosa, corta, laxa, raquis ligeramente flexuoso, 7-14 cm de largo; el pedúnculo erecto, 3.5-6.0 cm de largo, totalmente cubierto por la espata, el raquis erecto, 7 cm de largo. **Flores** 10-12, sucesivas, no resupinadas, sépalos y pétalos púrpura, casi negros, labelo blanco, fragancia no registrada. **Brácteas florales** de la mitad del largo del ovario, triangulares, agudas, 3-4 mm de largo. **Ovario** corto, no inflado, terete, 6-7 mm de largo. **Sépalos** extendidos, obovados, obtusos, 3-nervados, margen entero, 5.0-6.0 x 3.0-4.0 mm; los laterales ligeramente oblicuos, 5-nervados. **Pétalos** extendidos, oblanceolado espatulados, obtusos, 3-nervados, margen eroso dentado hacia el ápice, 5.5-6.0 x 2.0-2.5 mm. **Labelo** unido a la columna, base anchamente obcuneada, trilobado, 2.0-2.5 x 4.0-4.5 mm; tricalloso, los dos callos laterales prominentes, el medio más corto y no prominente; lóbulos laterales del labelo subtriangulares, redondeados, margen apical crenado, lóbulo medio ligeramente menor en superficie, subcuadrado, el margen apical redondeado, crenado con un par de incisiones. **Columna** algo arqueada haca abajo, corta, gruesa, 4.5-5.0 mm de largo. **Clinandrio** reducido, entero. **Rostelo** apical, hendido. **Antera** obovoidea con un apículo, 4 locular. **Polinios** 4, obovoides, lateralmente comprimidos. **Lóbulos laterales del estigma** prominentes, de la mitad de la cavidad estigmática. **Nectario** poco profundo, inflado, agudo, penetrando 1/8 del ovario, no ornamentado. **Cápsula** no vista.

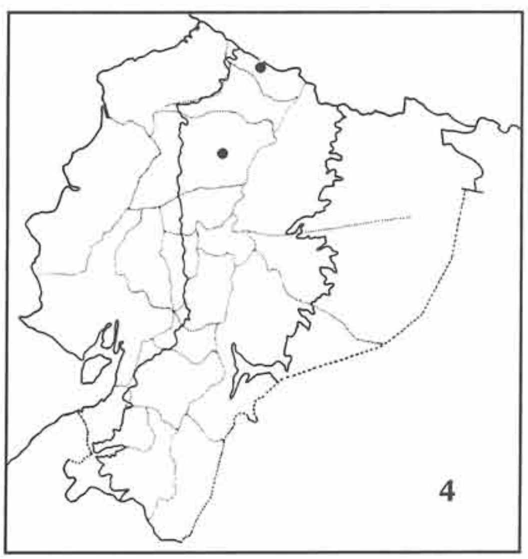
Sympodial, repent, epiphytic **herb. Roots** basal, fleshy, thick. **Stem** produced from the lower nodes of the previous stem, cane-like, erect, straight, terete. **Leaves** 3-5 per stem, distributed throughout the apical third, sheaths minutely striated and rugose when dry; blade linear-lanceolate, apex obtuse, bilobed, aristate, margin entire, hyaline. **Spathaceous bract** 1, ancipitose, oblong, acute. **Inflorescence** apical, racemose, short, lax-flowered, rachis slightly flexuose. **Flowers** 10-12, successive, non-resupinate, sepals and petals purple, nearly black, lip white. **Floral bracts** half as long as the ovary, triangular, acuminate. **Ovary** short, terete. **Sepals** spreading, obovate, obtuse, 3-veined, margin entire, the laterals somewhat oblique, 5 veined. **Petals** spreading, oblanceolate-spathulate, obtuse, 3-veined, margin erose-dentate towards the apex. **Lip** united to the column, base widely obcuneate, 3-lobed, 3-callused, the lateral calli prominent, the middle one smaller; lateral lobes of the lip subtriangular, rounded, apical margin crenate, midlobe slightly smaller in surface, subquadrate, apical margin rounded, crenate with a pair of incisions. **Column** somewhat arching downwards, short, thick. **Rostellum** apical, slit. **Clinandrium hood** reduced, entire. **Anther** obovoid, 4-celled.**Pollinia** 4, obovoid, laterally compressed. **Nectary** shallow, penetrating 1/8th of the ovary.

OTHER SPECIMENS: ECUADOR: Carchí: km 55, Tulcán-Maldonado, 2600 m, 1 VIII 1985, *Dodson 16137*, AMES! MO! QCA! QCNE! Above Maldonado, 2000-2500 m, 25 VIII 1978, *Luer 3356*, SEL!

DISTRIBUTION AND ECOLOGY: Known only from Ecuador. Epiphyte, from 2000 to 2600 m altitude. Flowering in August.

RECOGNITION: *Epidendrum hitchcockii* belongs to Mancum Group and Subgroup which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species has short inflorescence, 7-14 cm long, flowers purple, nearly black with a white lip, lobes of the lip with the apical margin, crenate. It is similar to *Epidendrum microglossum*but this species has a longer inflorescence, 12-20 cm long,, white, creamy flowers with yellow calli and apex of the column, the suborbicular lobes of the lip entire, with 2 calli and a low keel. *Epidendrum brachyglossum* Lindl. has a longer sepals and petals, flowers yellow-greenish, the lip white, column with small purple spots, linear petals, lateral lobes of the lip suborbicular, entire, the midlobe transversely rectangular, entire, bicallose lip. *Epidendrum microglossoides* Hágsater & Dodson is similar, but the rachis is straight, flowers are chocolate-brown with the column and lip white, petals spathulate, 1-veined, and the lateral lobes of the lip bifid, ending in two triangular, acute lobes, the midlobe is subquadrate with a 3-lobed, rounded, apex.

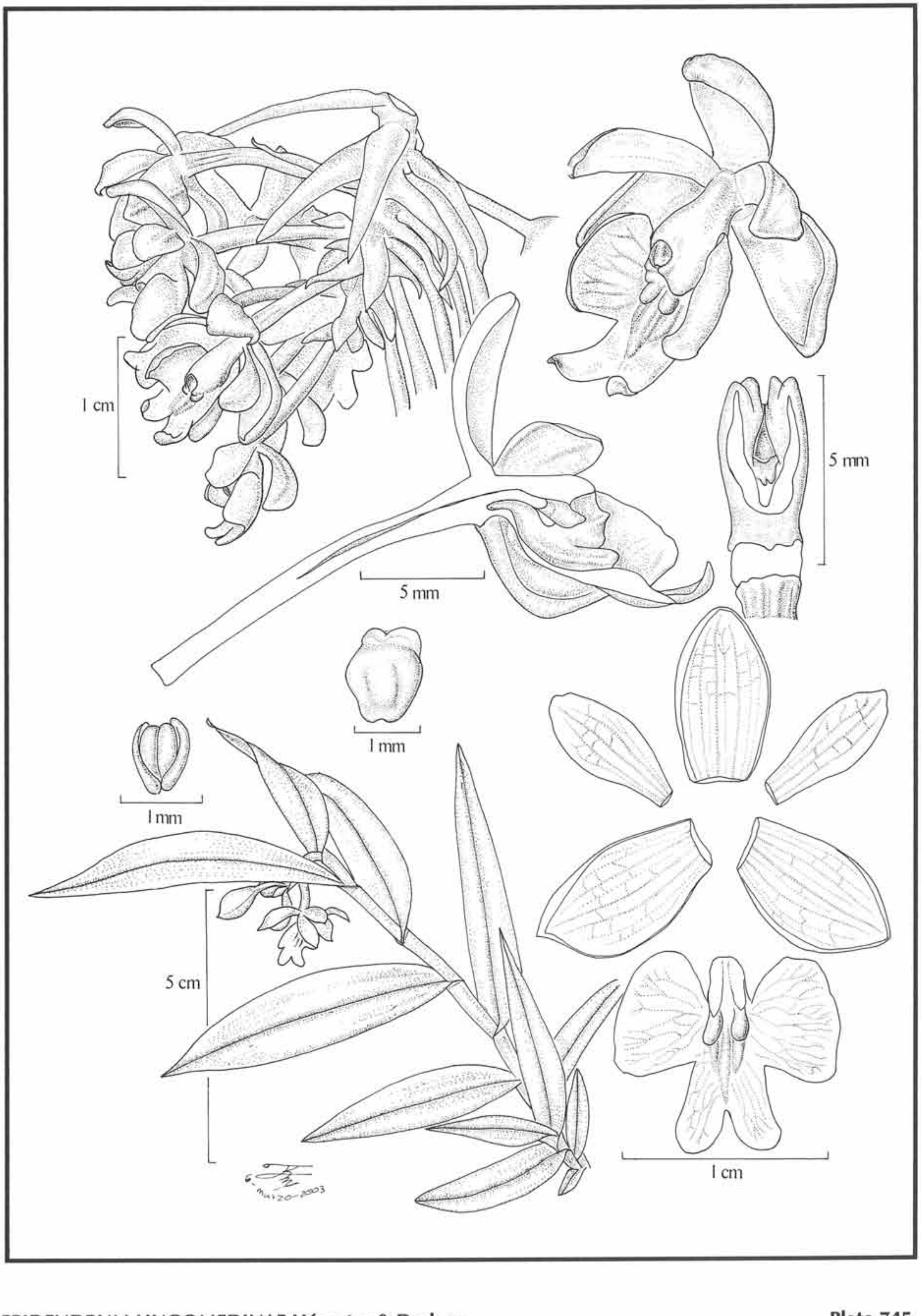
CONSERVATION STATUS: DD: Data deficient.



ETYMOLOGY: In honor of A. S. Hitchcock who collected the type specimen.

Author: L. Sánchez S. **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM HUGOMEDINAE Hágsater & Dodson

Plate 745

EPIDENDRUM HUGOMEDINAE Hágsater et Dodson, *sp. nov.*

ECUADOR: Morona Santiago: El Pangui, Chiguinda, vía Bermejos, Hort. Ecuagenera, 1600 m, epiphyte, pressed 08 March 2003. Collected by ***Hugo Medina Troyani.*** Cultivated by ***E. Hágsater 13860.*** Holotype: AMO! (Illustration voucher, in part flowers in stem).

Epidendro bicirrhato D. E. Benn. & E. A. Christenson simile sed floribus niveis cum 3 lineis violaceis in labelli carinis, labelli lobuli medii lobulis latis et rotundatis recedit.

Hierba epífita, cespitosa, de unos 20 cm de alto. **Raíces** basales, carnosas, gruesas. **Tallos** sencillos, tipo caña, ligeramente comprimidos lateralmente, delgados, muy ligeramente sinuosos hacia el ápice, de 20 x 0.2 cm. **Hojas** 7, distribuidas a lo largo del tallo, alternas, suberectas, carnosas; vaina tubular, finamente estriada, teñidas de morado, 10-14 x 1.5-2.0 mm; lámina oblongo elíptica, acuminada, lisa, margen entero, de color verde intenso, 2.5-7.0 x 0.6-1.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, pluriracemosa, florece durante varios años, arqueada, densa, multiflora, 2.0-3.5 cm de largo; pedúnculo terete, delgado, corto, oculto casi en su totalidad por una bráctea basal, anchamente ovada, acuminada, amplexicaule, 7 x 4 mm; raquis terete, delgado, corto, 0.8-1.8 cm de largo. **Brácteas florales** algo más cortas que el ovario, triangular lanceoladas, acuminadas, gradualmente más pequeñas hacia el ápice; las basales 8-13 x 2.0-2.4 mm; las apicales 4-5 x 1.5-1.8 mm. **Flores** hasta 28, simultáneas, resupinadas, atractivas, color blanco, el labelo con las quillas teñidas de violeta; fragancia dulce, especialmente hacia medio día, recuerda *Pittosporum spp.* (fide D. Newman). **Ovario** terete, delgado, liso, no inflado, 7-14 mm de largo. **Sépalos** extendidos, libres, carnosos, glabros, ápice redondeado, cóncavo, 8-nervados, margen entero; el **dorsal** elíptico, 8.2 x 4 mm; los **laterales** obovados, ligeramente oblicuos, diminutamente apiculados, 8.4 x 4.8 mm. **Pétalos** entreabiertos, libres, espatulados, obtusos, 3-nervado, las nervaduras laterales ramificadas desde la base, dando la apariencia de ser 5-nervados, margen entero, 6 x 3 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, margen entero, 9.5 x 10.6 mm; bicalloso, los callos delgados; disco provisto de 3 quillas paralelas, lisas, delgadas, la central, alargada hasta el seno apical; lóbulos laterales dolabriformes, redondeados, 4 x 6 mm; lóbulo medio bilobado, los lóbulos redondeados, ligeramente divaricados, 4 x 4.8 mm. **Columna** delgada, recta, obcónica en el ápice, 5 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de alrededor de 1/3 del largo de la cavidad estigmática. **Antera** obovoide, 4-locular. **Polinios** 4, angostamente ovados, sin llegar a ser tipo ala de pájaro, alargados, lateralmente fuertemente comprimidos, desiguales, los interiores menores. **Cápsula** no vista. **Nectario** sin penetrar el perianto, no inflado, no ornamentado.

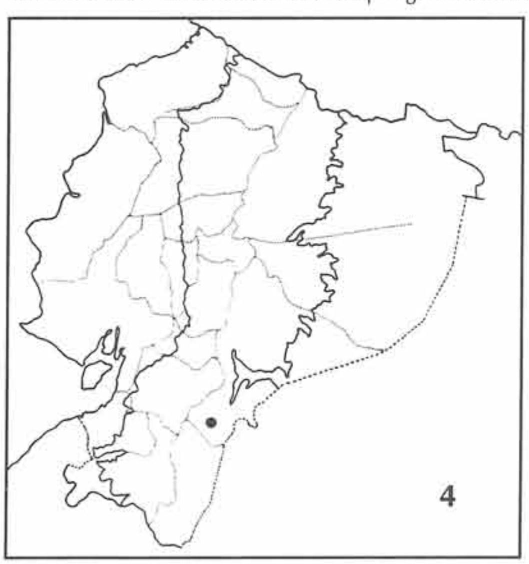
Epiphytic, caespitose **herb. Roots** basal, fleshy, thick. **Stems** cane-like, somewhat laterally flattened, thin. **Leaves** 7, distributed throughout the stem, suberect, fleshy; sheath tubular, somewhat striated when dry, purple tinged; blade oblong-elliptic, acuminate, smooth, margin entire, deep green. **Inflorescence** apical, pluri-racemose, flowering during several years, arching, dense, many-flowered; peduncle terete, thin, short, nearly totally hidden by a basal bract, widely ovate, acuminate, amplexicaul; rachis terete, thin, short. **Floral bracts** somewhat shorter than the ovary, triangular-lanceolate, acuminate, gradually shorter. **Flowers** up to 28, simultaneous, resupinate, very attractive, snow-white, the keels of the lip tinged violet; fragrance sweet, at mid-day, reminiscent of *Pittosporum spp.* **Ovary** terete, thin, smooth. **Sepals** spreading, free, fleshy, glabrous, apex rounded, concave, 8-veined, margin entire; the **dorsal** elliptic, the **laterals** obovate, slightly oblique, minutely apiculate. **Petals** partly spreading, free, spathulate, obtuse, 3-veined, the lateral veins branching from the base and appearing 5-veined, margin entire. **Lip** united to the column, 3-lobed, base deeply cordate, margin entire; bicallose, calli thin, disc with three, low, parallel keels, the central one reaching the apical sinus; lateral lobes dolabriform, rounded; midlobe bilobed, the lobes rounded, slightly divaricate. **Column** thin, straight, obconical towards the apex. **Clinandrium hood** rduced, entire. **Rostellum** apical, slit. **Anther** obovoid, 4-celled. **Pollinia** 4, narrowly ovate, elongate, strongly laterally flattened, the inside pair smaller. **Nectary** not penetrating the ovary, smooth.

OTHER SPECIMENS: None seen.

OTHER RECORDS: ECUADOR: southern Ecuador, hort. Ecuagenera, ca. 1600 m. *Walter Teague s.n.* AMO! Photograph, flower in spirit; illustration voucher, in part flowers in inflorescence. We wish to thank Dan Newman of Hanging Gardens, San Francisco, California for having brought the plant to our attention, and supplied this material.

DISTRIBUTION AND ECOLOGY: Known only from southeastern Ecuador, from the type locality reported by the collector, at 1600 m altitude. Flowering in March.

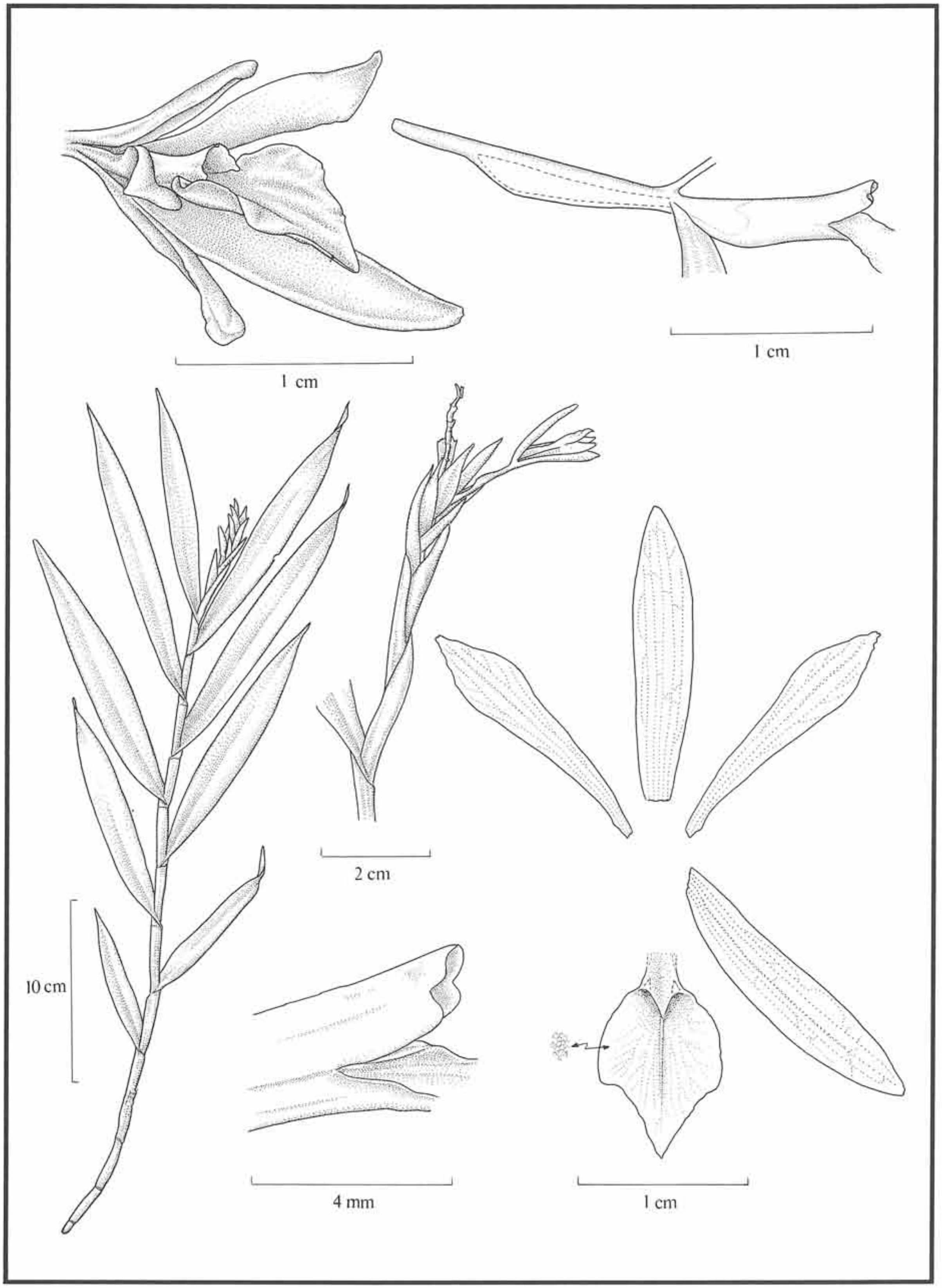
RECOGNITION: *Epidendrum hugomedinae* belongs to the Bicirrhatum Group, a small group of species which has appeared recently and is characterized by the caespitose habit, simple, leafy, short stems, compact, nodding inflorescence, conspicuous bracts about as long as the ovary, numerous fleshy, green and/or white flowers, with the midlobe deeply bilobulate, the lobules sometimes cirrhate; the pollinia are thin, and unequal, the inner pair smaller, without being of the bird-wing-type. The new species is recognized by the very attractive, snow-white flowers with the keels of the lip tinged violet and the obcuneate midlobe formed by two, rounded, somewhat divergent, lobes. *Epidendrum bicirrhatum* from northern Peru has pale cream-orange flowers with the base of the sepals and petals green, the tips of the keels of the lip lavender, the flowers are smaller, sepals being 4.6-5.2 mm long, and the lip has denticulate margins on the suborbicular lateral lobes, and cirrhate lobules on the midlobe. The Bolivian *Epidendrum ophidion* Dodson & Vásquez is quite similar to the latter, but has successive, white flowers with three purple lines on the disc, pustulate sepals 6-8 mm long, and the dolabriform lateral lobes with a crenulate margin. *Epidendrum tiwinzaënse* Hágsater & Dodson species has green flowers with a white lip and apical half of the column, and sepals some 7 mm long, the lip terminating in a pair of cirrhate lobes. *Epidendrum brachyblastum* Hágsater & Dodson has narrow lateral lobes of the lip, shorter apical cirrhae and deep green flowers with the lip and apical half of the column snow white.



CONSERVATION STATUS: DD. Data deficient. This attractive species will hopefully be propagated by Ecuagenera in Cuenca, Ecuador.

ETYMOLOGY: In honor of Hugo Medina Troyani, collector and grower at Ecuagenera, in Cuenca, Ecuador, who collected the species.

Authors: E. Hágsater & C. H. Dodson **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM HYGROHYLEPHILUM Hágsater & E. Santiago **Plate 746**

EPIDENDRUM HYGROHYLEPHILUM Hágsater et E. Santiago, *sp. nov.*

Type: COLOMBIA: Río Timbiquí, col. 1899, ***F. C. Lehmann sub Bentham Trustees 243.*** Holotype: AMES! (Illustration voucher). Isotypes: K! L! NY!

Epidendro ellipsophyllo L. O. Williams simile sed majus, petalis anguste oblanceolatis, labello hemielliptico in dimidio basali et triangulari in dimidio apicali, leviter constricto, clinandrio prominenti columnae corpore longiore, trilobato distinctum.

Hierba cespitosa, epífita, erecta, hasta de 38 cm de alto. **Raíces** basales, delgadas, blancas, 0.4-0.6 mm de grosor. **Tallos** sencillos, tipo caña, teretes en la base y ligeramente lateralmente aplanados hacia el ápice, ligeramente sinuosos, 15-33 x 0.25-0.4 cm. **Hojas** 6-9, distribuidas casi a todo lo largo del tallo, alternas, articuladas; vainas tubulares, estriadas, las 2 basales no foliosas, 1.6-3.4 cm de largo; lámina angostamente elíptica, acuminada, margen entero, 7.4-19.5 x 1.2-2.9 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, pluri racemosa (produce nuevos racimos a través de los años), erecta, 7-8 cm de largo; pedúnculo corto, terete, bialado, 3.3 cm de largo; cubierto totalmente por brácteas, conduplicadas, agudas, subimbricadas, semejantes a las brácteas florales, caedizas con el tiempo, 2.6-4.0 x 0.35-0.37 cm. **Brácteas florales** tan largas como el ovario, oblongo elípticas, agudas, margen entero, estriadas, conduplicadas e imbricadas, fibrosas con el tiempo, 1.3-2.3 x 0.2-0.3 cm. **Flores** sucesivas, una presente a la vez, resupinadas, en forma de trompeta, color blanco con bandas pálido verdosas, sin datos de fragancia. **Ovario** terete, dilatado ventralmente en los 2/3 apicales, 15 mm de largo. **Sépalos** entreabiertos, libres, angostamente elíptico oblanceolados, obtusos, 5-nervados, margen entero, 17-18 x 3.5 mm. **Pétalos** entreabiertos, libres, angostamente oblanceolados, ápice agudo truncado, 3-nervados, las nervaduras laterales ramificadas, margen entero, 11 x 3.5 mm. **Labelo** unido a la columna, entero, la mitad basal verticalmente hemielíptica, la mitad apical, triangular, aguda, margen entero, 10 x 7.3 mm; unicalloso, el callo triangular, agudo; disco diminutamente papiloso. **Columna** delgada, recta, ligeramente arqueada hacia arriba, 10 mm de largo incluyendo el clinandrio. **Clinandrio** prominente, sobrepasando el cuerpo de la columna, margen ligeramente trilobado, los lóbulos redondeados, enteros. **Antera** no vista. **Polinios** no vistos. **Rostelo** hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando 2/3 del ovario, inflado. **Cápsula** no vista.

Epiphytic, caespitose, erect **herb. Roots** basal, thin. **Stems** simple, cane-like, terete at base, laterally flattened above, somewhat sinuous. **Leaves** 6-9, distributed throughout the stem, sheaths tubular, striated, blade narrowly elliptic, acuminate, margin entire. **Inflorescence** apical, pluriracemose (producing new racemes over the years), erect, peduncle short, two-winged, totally covered by conduplicate, acute, subimbricated bracts. **Flowers** successive, one present at a time, resupinate, trumpet-shaped, white striped with pale green. **Ovary** terete, inflated ventrally along the apical 2/3. **Sepals** partly spreading, free, narrowly elliptic-oblanceolate, obtuse, 5-veined, margin entire. **Petals** partly spreading, free, narrowly oblanceolate, apex acute-truncate, 3-veined, the lateral veins branching, margin entire. **Lip** united to the column, entire, the basal half hemielliptic, the apical half triangular, acute, margin entire; callus triangular, acute. **Column** straight, thin. **Clinandrium hood** prominent, much longer than the column, three-lobed, lobes rounded, entire. **Nectary** penetrating 2/3 of the ovary, inflated.

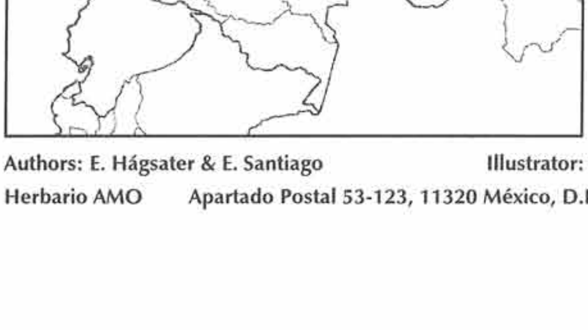
OTHER SPECIMENS: COLOMBIA: Chocó: Río El Salto, 9 km W of Andagoya, 23 II 1971, *Lellinger 458*, US!

DISTRIBUTION AND ECOLOGY: Known only from Colombia, along the Pacific lowlands, epiphytic in forests at about 100 m altitude. Flowering in February and probably throughout the year.

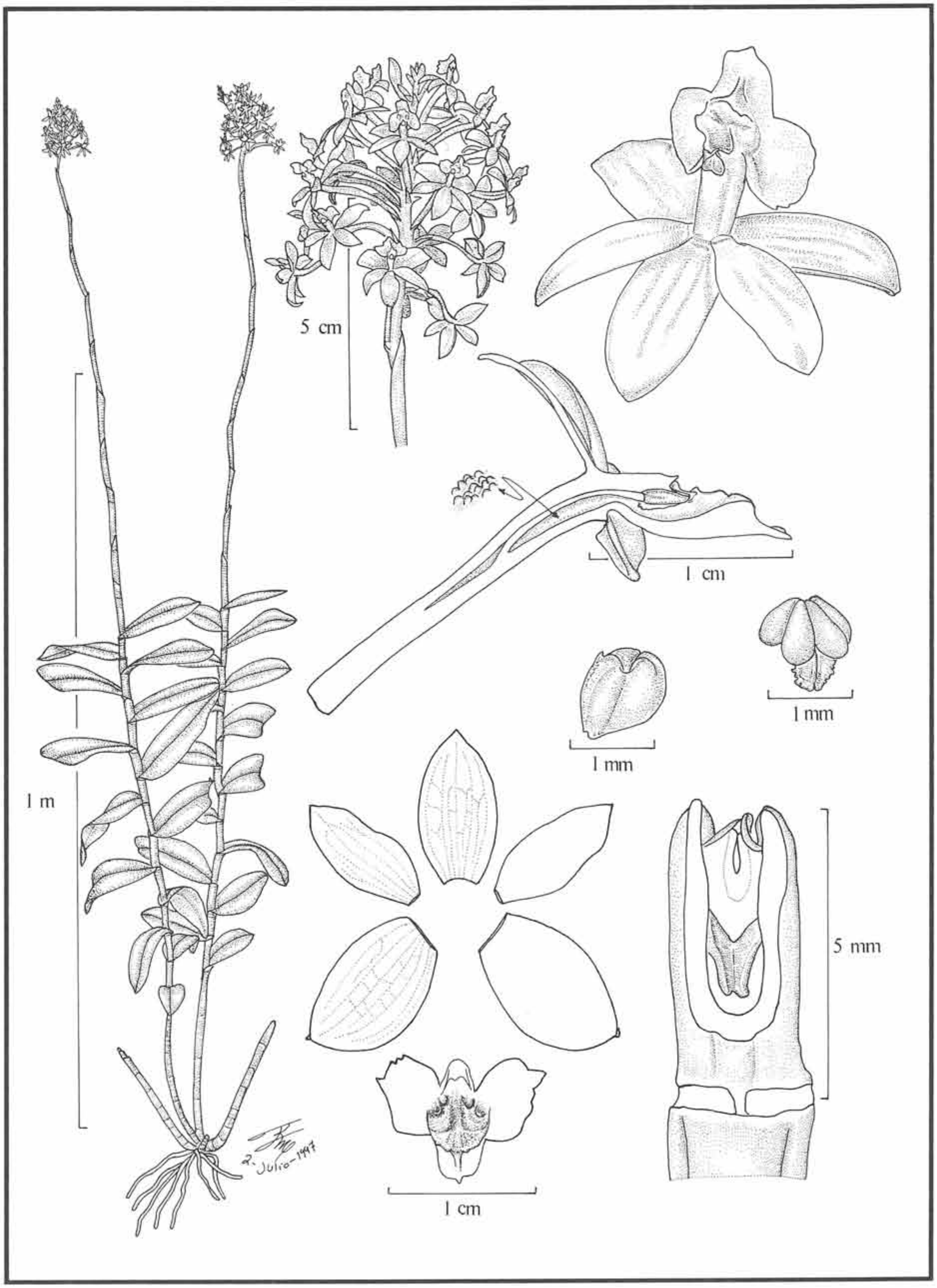
RECOGNITION: *Epidendrum hygrohylephilum* belongs to the Albertii Group, Ellipsophyllum Subgroup recognized by the leafy stems, short two-winged peduncle of the inflorescence mostly covered by bracts and successive flowers, with a very long clinandrium hood. This species has an apical inflorescence, trumpet shaped flower, large leaves, up to 19.5 cm long and relatively larger flowers, sepals 17-18 mm long, prominent clinandrium much longer than the body of the column, the lip hemielliptic at the base, triangular at the somewhat constricted apex, callus triangular. It is similar to *Epidendrum ellipsophyllum* which has smaller leaves, sepals 10-13 mm long, small, spreading, triangular, lateral lobes of the lip, the midlobe hemiorbicular, rounded, and wide, spathulate, rounded petals. *Epidendrum salpianthum* Hágsater & Dressler has the inflorescence slightly shorter than the apical leaves, and the flowers trumpet shaped, the apex of the 14-15 mm long sepals clearly reflexed, and the leaves 8-12 x 1.6-2.4 cm.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: Hygrohylephilum is derived the Greek, υγρος- wet, moist, υλη- forest, and φιλο- loving: loving wet forests. In reference to the Pacific lowlands of Colombia, the area of highest rainfall in the neotropics, where this species is found.



Authors: E. Hágsater & E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM IGNEUM Hágsater

Plate 747

EPIDENDRUM IGNEUM Hágsater, *sp. nov.*

Type: COLOMBIA: Chocó: antes de San José del Palmar, 1900 m, cultivated in Colomborquídeas, and later in México City, collected June 1990, *Julio Cesar Miranda [Rodrigo Escobar 5271]*, pressed 17 July 1997, ***E. Hágsater 11562.*** Holotype: COL! (Illustration voucher). Clonotype: Cultivated at Colomborquídeas, *Rodrigo Escobar 5271*, AMO! (Photographic voucher, Orquídeas Nativas de Colombia 5: 756, photo #865. 1994).

Epidendro catillus Rchb. f. simile sed floribus intense rubris, callo magno suggestum flabellatum transversalem et 2 pyramidas humiles luteas utrinque ferenti, labelli lobulis lateralibus quam lobulo medio multo majoribus, ad marginem integris recedit.

Hierba litófita, cespitosa, tallo nuevo originándose de la base del tallo anterior, 140-190 cm de alto incluyendo la inflorescencia. **Raíces** producidas en la base de los tallos, filiformes, blanquecinas, carnosas, 1.8-2.4 mm de grosor. **Tallos** sencillos, tipo caña, erectos, teretes, 70-90 cm de largo, 5-9.5 mm de grosor. **Hojas** numerosas, ca. 16, alternas, distribuidas a lo largo de los 2/3 apicales del tallo; vaina tubular, lisa, escariosa al secar, 2.5-5.5 cm de largo; lámina foliar articulada, ovada, ápice bilobado, margen entero, coriácea, lisa, verde oscuro, con tintes amoratados en el reverso, 8-15 x 3.9-5.1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, produciendo nuevos racimos del pedúnculo viejo, 65 cm de largo; pedúnculo largo, terete, erecto, 57 cm de largo, cubierto completamente por vainas tubulares, imbricadas, obtusas, las apicales acuminadas, escariosas, 5.5-7.5 cm de largo; raquis 8 cm de largo, no ornamentado. **Flores** sucesivas, ca. 35, unas 20 abiertas a la vez, no resupinadas, fragancia no apreciable, rojas, con los callos amarillos, antera amarillenta. **Brácteas florales** mucho más cortas que el ovario, las basales mucho más grandes que las apicales, triangulares, agudas a acuminadas, 3-11 x 2 mm. **Ovario** pedicelado, no inflado, de sección circular, no ornamentado, recto, 1.9-2.7 cm largo. **Sépalos** extendidos, arqueados, libres, glabros, membranáceos. **Sépalo dorsal** elíptico, agudo, margen entero, 5-nervado, 9.5-10 x 5-5.5 mm. **Sépalos laterales** elípticos, agudos, ligeramente aristados, margen entero, 5-nervados, 10-10.5 x 6.5-7 mm. **Pétalos** extendidos, libres, glabros, membranáceos, oblongos, agudos, margen entero, 5-nervados, 9.5 x 4.5 mm. **Labelo** unido a la columna, trilobado, profundamente cordado, lóbulos laterales del doble de tamaño del apical, 8 x 10-11 mm; lóbulos laterales subrómbicos, oblícuos, margen apical algo dentado, retrosos, 5-5.5 x 4.5-5 mm; lóbulo medio subcuadrado, ápice triangular, obtuso y mucronado, 3-3.5 x 3-3.5; callo masivo cubriendo el disco, engrosado, flabeliforme, terminado en una quilla corta, con dos huecos cóncavos hacia los lados y base, estos amarillentos, el resto del labelo rojo. **Columna** recta, arqueada respecto del ovario, corta, delgada, los lados más largos que el dorso, curveados hacia arriba, 5-5.5 mm de largo. **Clinandrio** corto, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, casi tan largos como la cavidad estigmática. **Nectario** poco profundo, penetrando 1/3 de pedicelo, ornamentado con numerosas papilas semiesféricas. **Antera** obovoidea, diminutamente papilosa, 4-locular. **Polinario**: polinios 4, angostamente elípticos, los dos exteriores más pequeños; **caudículas** suaves, en forma de tejas, más largas que los polinios; **viscidio** semilíquido, transparente. **Cápsula** no vista.

Terrestrial, caespitose **herb. Stems** cane-like, terete. **Leaves** numerous, ovate, apex bilobed, coriaceous. **Inflorescence** terminal racemose, erect, with a long peduncule, completely covered by tubular, imbricated sheaths. **Flowers** successive, ca. 35, about 20 open at one time, non resupinate, red with yellow callus and yellowish anther. **Floral bracts** much shorter than the ovary, triangular, acute to acuminate. **Ovary** straight, not inflated. **Sepals** elliptic, acute, margin entire, 5-veined. **Petals** oblong, acute, margin entire, 5-veined, somewhat narrower than the sepals. **Lip** 3-lobed, deeply cordate, lateral lobes, subrhombic, oblique, apical margin dentate, twice the size of the subquadrate apical lobe which has a triangular, mucronate, obtuse apex; callus massive covering the disk, thickened, flabellate, ending in a short keel, with two concave holes at each side near the base. **Column** arched at base with respect to the ovary, straight, the sides long and arched upwards at the apex. **Clinandrium hood** short, margin entire. **Nectary** penetrating 1/3 of the ovary, ornamented with numerous papillae. **Polinia** 4, obovate, the caudicules soft, like stacked roof tiles.

OTHER SPECIMENS: COLOMBIA: Chocó: Frontino, *Hágsater 11708,* AMO (spirit)!

OTHER RECORDS: COLOMBIA: Antioquia: between Yarumal and Valdivia, 1973, *Herbert Österreich*, illustration (Abb. 20) in **Die Orchidee** 30: 19. 1979. **Chocó:** San José del Palmar, *Escobar 5271*, **Orquídeas Nativas de Colombia** 5: 756, fig. 865. 1994. **Valle del Cauca:** Mpio. El Cairo, Serranía de los Paraguas, *Andrea Niessen*, personal communication. Camino a Buenaventura, *P. Ortiz V. s.n.*, slide, AMO!

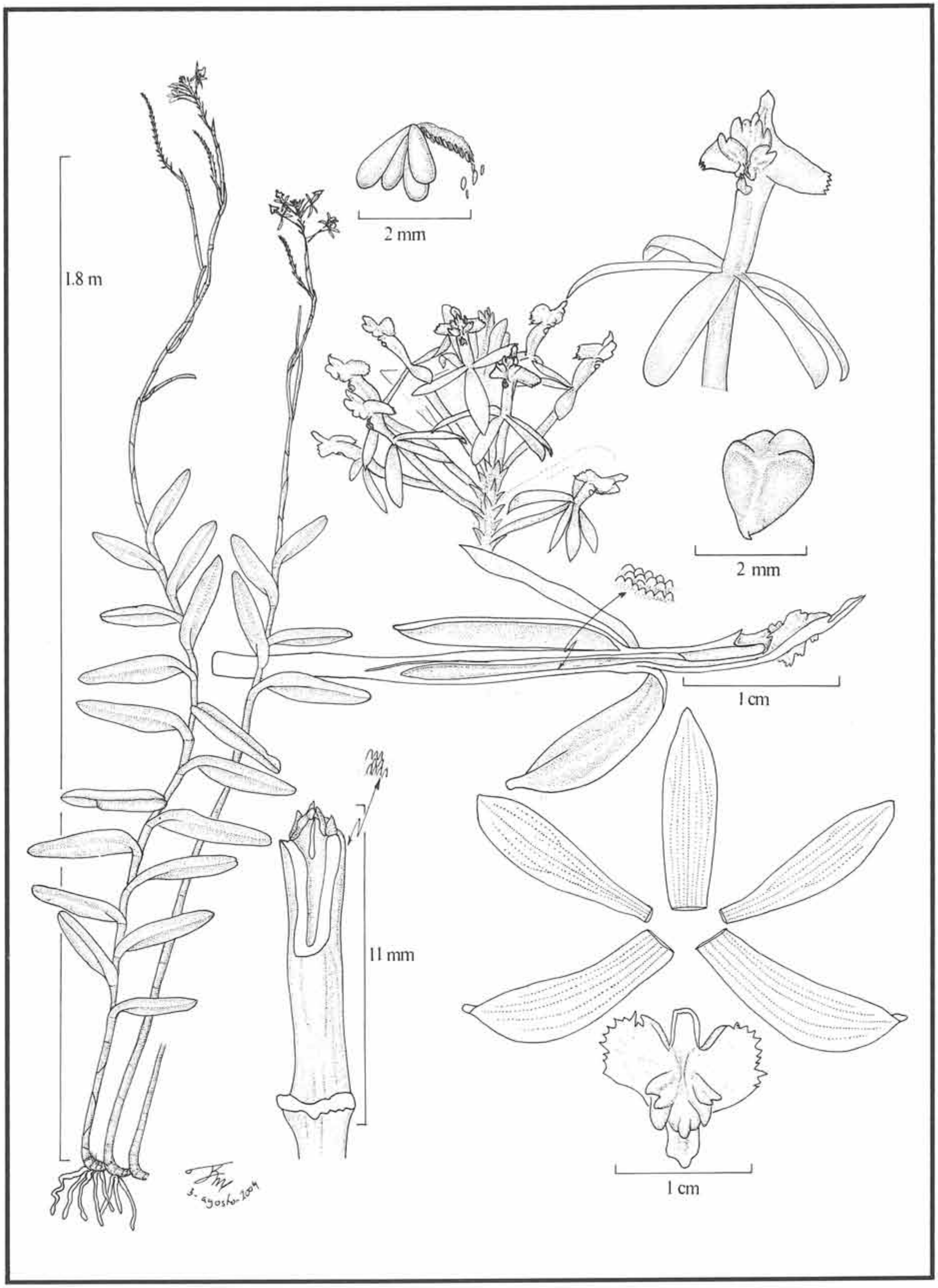
DISTRIBUTION AND ECOLOGY: Endemic to the Cordillera Occidental of Colombia, in the departments of Valle del Cauca and Chocó, and possibly Antioquia. At around 1900 m, growing on rocks in very humid conditions. Flowering throughout the year in cultivation.

RECOGNITION: *Epidendrum igneum* belongs to the Elongatum Subgroup of the Secundum Group which is characterized by the caespitose habit, simple, terete stems, numerous, oblong-elliptic, bilobed leaves, a mostly elongate inflorescence, with a raceme of successive, non-resupinate flowers, the lip with a complicated, fleshy callus. The species is recognized by the non resupinate bright red flowers with a massive callus formed by a transverse flabellate plate and two rounded, yellow low mounds on each side; the lateral lobes larger than the midlobe. The species is somewhat close to *Epidendrum imperator* Hágsater which has larger flowers, oblanceolate, acute sepals 14-18 mm long, and the lip has a massive, tridentate, yellow callus. *Epidendrum catillus* Rchb.f., also has larger flowers, but the sepals are obtuse, and the lip has a flabellate, white callus.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *igneus*, fire-red, in reference to the bright red color of the flowers.



EPIDENDRUM IMPERATOR Hágsater

Plate 748

EPIDENDRUM IMPERATOR Hágsater, *sp. nov.*

Type: COLOMBIA: Antioquia: La Unión, 2500 m, hort. México, 15 October 2000, collected and grown by Gustavo Adolfo Aguirre, ***E. Hágsater 11524.*** Holotype: COL! (Illustration voucher). Isotypes AMES! AMO! JAUM!

Epidendro catillus Rchb.f. simile sed segmentis floralibus angustioribus acutis, labelli callo majore tridentato discrepans.

Hierba litófita, simpodial, cespitosa, tallo nuevo originándose de la base del tallo anterior, 160-240 cm de alto incluyendo la inflorescencia. **Raíces** producidas en la base de los tallos, blanquecinas, carnosas, 2 mm de grosor. **Tallos** sencillos, tipo caña, erectos, teretes, 120 x 0.65-0.85 mm. **Hojas** 12-16, alternas, distribuidas a lo largo de los 2/3 apicales del tallo; vaina tubular, lisa, escariosa al secar, 5-6 cm de largo; lámina foliar articulada, ovada, ápice bilobado, margen entero, coriácea, lisa, verde oscuro, con tintes amoratados en el anverso, 12-21 x 4.3-5.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, produciendo nuevos racimos del pedúnculo viejo, 120 cm de largo; pedúnculo largo, terete, erecto, 80 cm de largo, cubierto completamente por vainas tubulares, obtusas, escariosas, 5.5-6.5 cm de largo; raquis 5-8 cm de largo, no ornamentado. **Flores** sucesivas, hasta ca. 30 por racimo, unas 8 abiertas a la vez, no resupinadas, fragancia ausente, rojas, con el callo blanco, antera verde. **Brácteas florales** mucho más cortas que el ovario, las basales mucho más grandes que las apicales, triangulares, agudas a acuminadas, 3-14 x 2 mm. **Ovario** pedicelado, no inflado, de sección circular, no ornamentado, recto, 2.4-4.1 cm largo. **Sépalos** extendidos, algo reflexos, libres, oblongos, agudos, glabros, margen entero; el **dorsal** 5-nervado, 15-17 x 4.5 mm, los **laterales** oblicuos, ligeramente aristados, 5-7-nervados, margen entero, 14-18 x 4.0-5.3 mm. **Pétalos** extendidos, libres, glabros, oblanceolados, agudos, 3-nervados, las nervaduras ramificadas arriba, margen entero, 13-15 x 3.2 mm. **Labelo** unido a la columna, trilobado, profundamente cordado, lóbulos laterales mucho más grandes que el apical, 10 x 12 mm; lóbulos laterales suborbiculares, retrorsos, margen apical profundamente dentado, 6 x 6 mm; lóbulo medio subcuadrado, ápice obtuso, 4 x 2 mm; callo masivo cubriendo el disco, engrosado, formando un tridente, los dientes laterales oblicuos, el centro formando una masa flabeliforme terminado en una quilla corta, con un par de cavidades cóncavas a cada lado cerca de la base. **Columna** ligeramente arqueada hacia arriba, delgada, los lados más largos que el dorso, curvados hacia arriba, 9-11 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Nectario** muy profundo, penetrando la ½ del ovario, ornamentado con numerosas papilas semiesféricas. **Antera** obovoide, aguda, diminutamente papilosa, 4-locular. **Polinios** 4, angostamente obovoides; caudículas suaves, en forma de tejas, más largas que los polinios; viscidio semilíquido, transparente. **Cápsula** no vista.

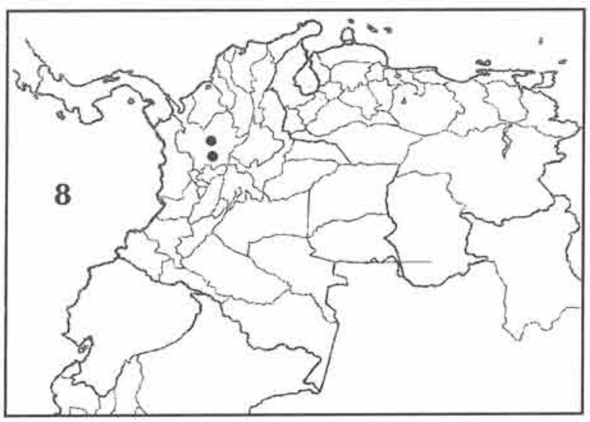
Lithophytic, sympodial, caespitose **herb. Stems** cane-like, terete. **Leaves** 12-16, ovate, apex bilobed, coriaceous. **Inflorescence** apical, pluri-racemose, erect, with a long peduncle, completely covered by tubular, obtuse sheaths. **Flowers** successive, ca. 30, about 8 open at one time per raceme, non-resupinate, red with a white callus and green anther. **Floral bract** much shorter than the ovary, triangular, acute to acuminate. **Ovary** straight. **Sepals** spreading, somewhat reflexed, oblong, acute, glabrous, margin entire, 5-7-veined. **Petals** spreading, oblanceolate, acute, margin entire, 3-veined, somewhat narrower than the sepals. **Lip** united to the column, 3-lobed, deeply cordate, lateral lobes, suborbicular, retrorse, apical margin deeply dentate, much larger than the apical lobe which has an obtuse apex; callus massive covering the disk, thickened, tridentate, the sides form oblique teeth, center flabellate, ending in a short keel, with two concave cavities at each side near the base. **Column** slightly arching upwards, the sides long and arched upwards at the apex. **Clinandrium hood** reduced, margin entire. **Nectary** penetrating 1/2 of the ovary, papillate. **Pollinia** 4, obovoid, the caudicles soft, like stacked roof-tiles.

OTHER SPECIMENS: COLOMBIA: Antioquia: *Day in 73*. W 47465 in part, central specimen on the main sheet, and upper right-hand envelope (this specimen traced by Ames as the type of *E. catillus*, together with the illustration on blue paper which does not correspond to that specimen). Yarumal, Alto de Ventanas, 2050 m, 10 XI 1988, *Múnera 307*, AMO! (Voucher of photograph). Sonson, *Wallis*, W 47466!, tracing at AMES! Illustration W 34753!

OTHER RECORDS: COLOMBIA: Bought at a sale of Mr. Linden's at Stevens', Sept. 19th, 1872, from New Granada, *John Day 17: 49*, colored sketch, K! **Antioquia:** Entre Medellín y Mesopotamia, hort.,1 IV 1987, *Head s.n.*, flower in spirit, AMO! Cultivated, *Colomborquídeas,* (based on *Múnera 307*) photograph, **Orquídeas Nativas de Colombia** 2: 169, fig. 176. 1991. Antioquia, 1700-2200 m, *Duque 31*, photograph, AMO!

DISTRIBUTION AND ECOLOGY: Endemic to northern Colombia, on rocks in the Cordillera Central in Antioquia, southeast of Medellín, at 2000-2500 m altitude. Flowering in cultivation in Mexico throughout the year.

RECOGNITION: *Epidendrum imperator* belongs to the Secundum Group, characterized by the sympodial habit, cane-like stems, numerous leaves, usually elongate peduncle of the inflorescence, the brightly-colored flowers produced on a short raceme, several at a time in succession over a long period, and Elongatum Subgroup which has non-resupinate flowers, the lip with a complicated callus. The species has large, bright red flowers with a massive white callus, the sepals and petals are narrow and acute, the lip appears three cornered as the front margin of the lateral lobes is revolute in natural position, with a massive, wide, three-pointed callus. It is closely related and has been confused with *Epidendrum catillus* which has wider, obtuse segments and the callus of the lip is narrow and elliptic. *Epidendrum igneum* Hágsater has smaller flowers, wider segments and the lip has a fleshy red callus with two small yellow mounds near the base. *Epidendrum vinosum* Rchb. f. (often confused with *E. catillus*), has a small, triangular lip with wine-pink flowers and occurs on the eastern slopes of the Andes in Ecuador and Peru.



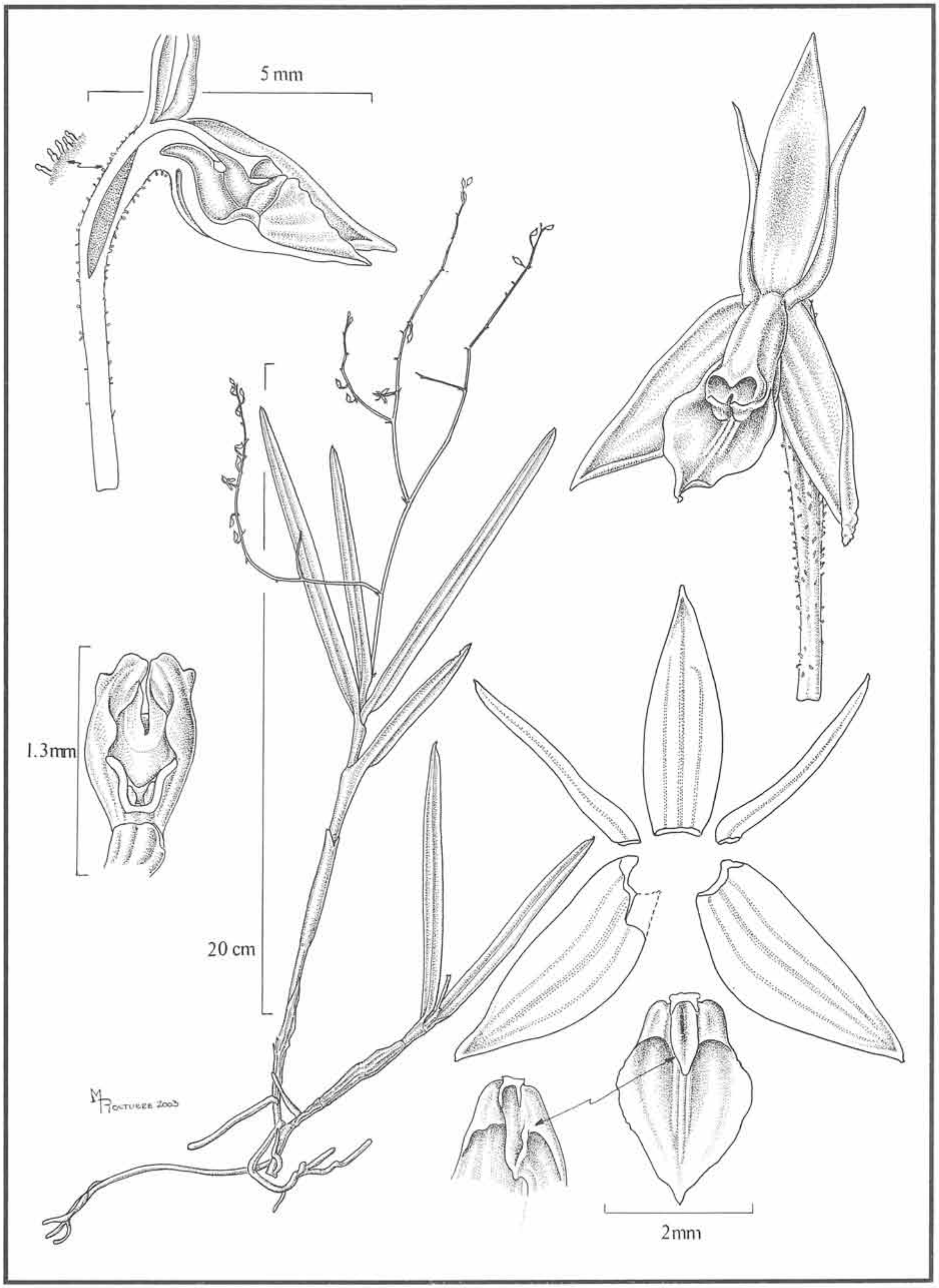
NOTE: This species has been confused with *E. catillus* since the late 19th century, first in John Day's notes, as well as the specimen in the Reichenbach Herbarium. When Ames traced type specimens in Vienna he correctly illustrated the Warscewicz specimen as the type of *E. catillus*, but also included a view of the flower which corresponds to the *Wallis* specimen.

CONSERVATION STATUS: DD. Data deficient. Apparently seldom in cultivation in Medellín.

ETYMOLOGY: *Imperator* was the unpublished name originally used by John Day, credited to Linden, in his notebook to identify this species. The large, deep red-colored flowers and massive, white callus of the lip give this species a majestic look.

Author: E. Hágsater **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM ISIS Hágsater & Dodson

Plate 749

EPIDENDRUM ISIS *Hágsater et Dodson, sp. nov.*

Type: ECUADOR: Loja: Bosque Petrificado Puyango. Camino a Quemazones, 420 m, 19 February 1998, ***X. Cornejo* & *C. Bonifaz* 6065.** Holotype: QCNE! (Illustration voucher).

Epidendro lanipes Lindl. simile sed habitu multo graciliore, floribus minoribus subtilibus, labello integro bisacciformi cum 2 cuniculis sacciformibus ad calli integri et bilamelati latera dispositis differens.

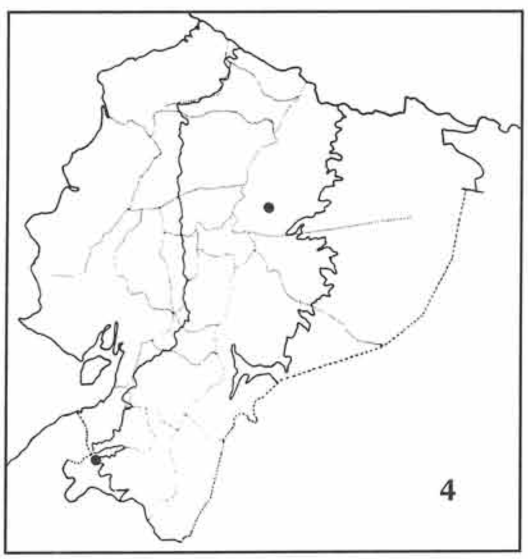
Hierba epífita o terrestre, cespitosa, erecta, de ca. 30-50 cm de alto o más. **Raíces** de la base de la planta, carnosas, gruesas, blancas, 0.8-2.2 mm de grosor. **Tallos** sencillos, tipo caña, ligeramente engrosados, teretes, delgados, rectos, 12.5-33 x 0.17-0.37 cm. **Hojas** 4-6 distribuidas hacia el ápice del tallo, alternas, articuladas, suberectas; vaina tubular, algunas ligeramente infladas en el ápice cuando secas, sin llegar a ser infundibuliformes, ligeramente estriadas, fibrosas con el tiempo, 1-5.5 x 2.8-3.5 mm; lámina oblongo lanceolada, ápice bilobado, con una quilla dorsal baja, margen entero, 4-19 x 0.4-0.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, paniculada, suberecta, compuesta por 4 a 6 ramas, alargadas, multifloras, densas, que ocasionalmente producen una rama corta, 15-17 cm de largo; pedúnculo largo, terete, delgado, recto, provisto en la parte basal de una bráctea triangular, aguda, 3 mm de largo; raquis elongado, muy delgado, recto, 12.5-14.5 cm de largo. **Brácteas florales** de la mitad del largo del ovario, angostamente triangulares, acuminadas, 1.3 mm de largo. **Flores** ca. 180, simultáneas, resupinadas, muy pequeñas, sépalos pardo verdosos, labelo blanco verdoso, columna blanca; sin datos de fragancia. **Ovario** terete, delgado, no inflado, cubierto con tricomas moniliformes, 1.7-3.7 mm de largo. **Sépalos** extendidos, libres, angostamente ovados, acuminados, lisos, 3-nervados, margen entero, 3.4-3.6 x 1-1.4 mm; los **laterales** oblicuos. **Pétalos** erectos, libres, en posición natural paralelos al sépalo dorsal, con aspecto de cuernos alargados, linear lanceolados, ligeramente más anchos y oblicuos en la base, acuminados, 1-nervados, margen entero, 3 x 0.3 mm. **Labelo** unido a la columna, entero, triangular cordiforme, base bisacciforme, con un cunículo a cada lado del callo, margen ligeramente irregular, ápice agudo; unicalloso el callo bilamelado, oblongo en la base y triangular en el ápice, provisto de 3 quillas paralelas, delgadas, bajas, lisas, 2.8 x 1.8 mm. **Columna** gruesa, arqueada, con un par de engrosamientos apicales, 1.3 mm de largo. **Clinandrio** corto, margen entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, largo, hendido. **Lóbulos laterales del estigma** muy pequeños, de 1/5 del largo de la cavidad estigmática. **Nectario** corto, sin penetrar el perianto. **Cápsula** no vista.

Epiphytic or terrestrial, erect, caespitose **herb. Roots** from the base of the plant, fleshy, thick, white. **Stems** simple, cane-like, slightly thickened, terete, straight. **Leaves** 4-6, distributed towards the apex of the stem, alternate, articulate, suberect; sheath tubular, slightly striated when dry, fibrous with time; blade oblong-lanceolate, apex bilobed, with a low dorsal keel, margin entire. **Inflorescence** apical, paniculate, suberect, composed of 4-6 densely many-flowered branches, peduncle long, terete, thin, straight, provided near the base with a triangular, acute bract; rachis elongate, very thin, straight. **Floral bracts** half as long as the ovary, narrowly triangular, acuminate. **Flowers** ca. 180, simultaneous, resupinate, very small, sepals greenish brown, lip greenish white, column white. **Ovary** terete, thin, covered by moniliform trichomes. **Sepals** spreading, free, narrowly ovate, acuminate, smooth, 3-veined, margin entire; the **laterals** oblique. **Petals** erect, free, parallel to the dorsal sepal and horn-like, linear-lanceolate, slightly wider and oblique at the base, acuminate, 1-veined, margin entire. **Lip** united to the column, entire, triangular-cordiform, base bi-saccate, one on each side of the callus, the margin slightly irregular, apex acute; unicallose, the callus two-winged, oblong at the base and triangular at the apex, provided with 3, parallel, narrow, low, smooth keels. **Column** thick, arched, with a pair of apical thickenings. **Clinandrium hood** short, margin entire. **Rostellum** apical, long, slit. **Lateral lobes of the stigma** very small, 1/5 of the length of the cavity. **Nectary** short, not penetrating the ovary.

OTHER SPECIMENS: ECUADOR: Cañar: San Vicente, El Troncal, 600 m, hort. Ecuagenera, 26 I 2004, *Hágsater 14030*, AMO! **Napo:** [see note in Distribution and Ecology] Achidona, Parque Nacional Galeras, 2 km SW of Santa Rosa de Arapino, 1400 m, 5 IV 1996, *Vargas 967*, QCNE!

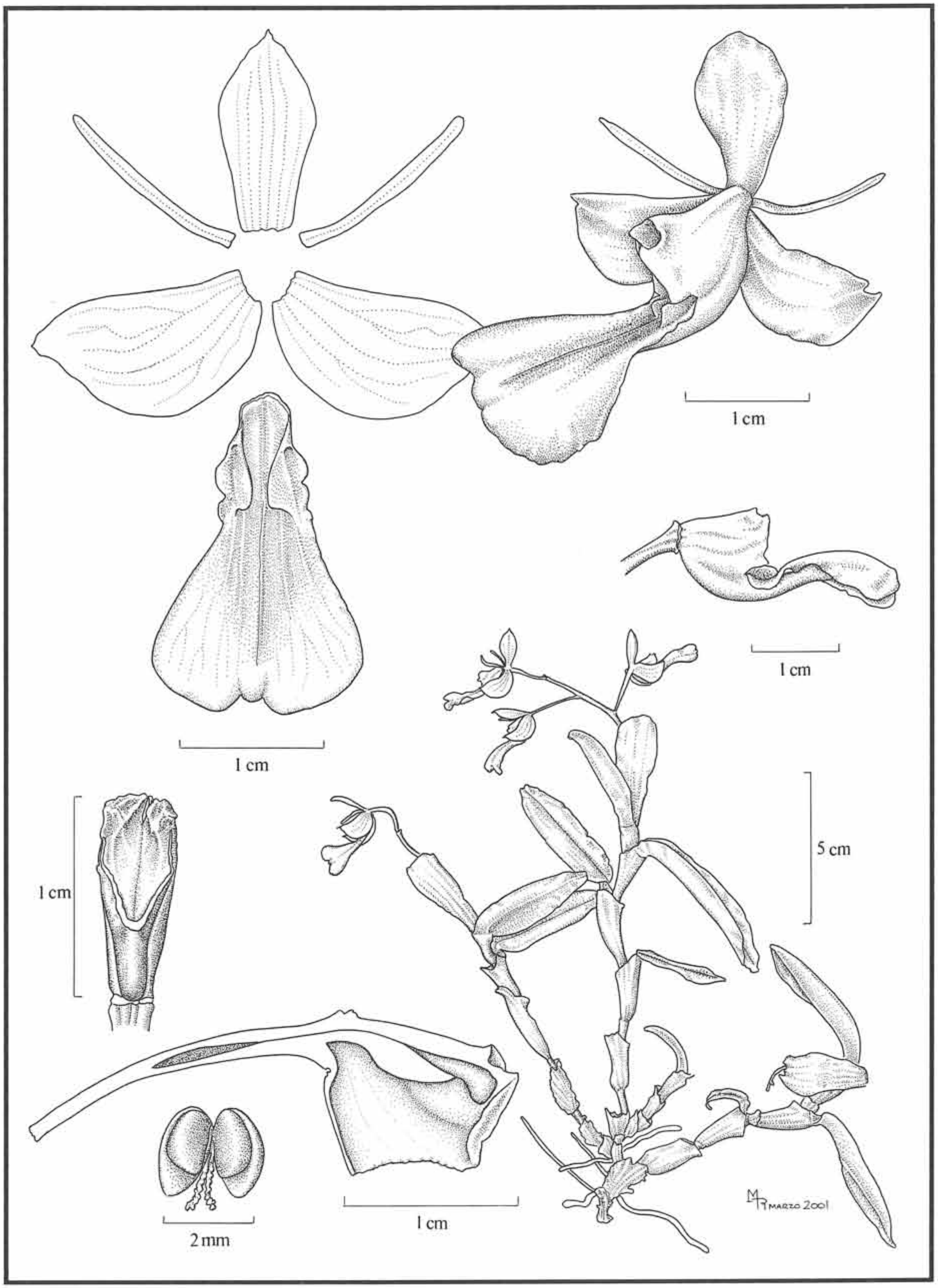
DISTRIBUTION AND ECOLOGY: Known from the Pacific slope in southern Ecuador at 400-600 m altitude, epiphytic in disturbed dry premontane forest; flowering in January and April. Also reported from the Amazon basin in northern Ecuador at 1400 m, terrestrial in premontane pluvial, primary forest, flowering in April. The Amazon locality is probably a mistaken label; such diverse ecological (wet vs. dry) and geographic (Amazon vs. Pacific slope) conditions are highly unlikely.

RECOGNITION: *Epidendrum isis* belongs to the Amblostoma Group, Amblostomoides Subgroup which is characterized by the caespitose habit, thinly fusiform stems, narrow, coriaceous, apically bilobed leaves distributed along the apical half of the stems,erect,large paniculate inflorescence, the flowers greenish yellow to white, usually pubescent ovaries and sepals, and the lip usually 3-lobed. The species has an entire lip with the sac-like structures at the base are quite distinct, as is the very small size of the flowers. *Epidendrum lanipes* common on the eastern side of the Andes, has lager, fragrant, white flowers, the petals horizontal and the lip 3-lobed, without any basal sac-like structures..



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the Egyptian goddess of heaven, *Isis*, represented with a head-dress composed of a pair of upright cow-horns embracing a sun-disk, similar to the upright petals running next to the dorsal sepal.



EPIDENDRUM KYMATOCHILUM Hágsater & Dodson

Plate 750

EPIDENDRUM KYMATOCHILUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Above Jimbura, 3150 m, 22 March 1984, ***Carlyle A. Luer, Stig Dalström, T. Höijer, & J. Kuhn. 9653.*** Holotype: SEL! (Illustration voucher).

Epidendro orbiculato C. Schweinf. simile sed labello cuneato cum lobulis lateralibus incipentibus rotundatis et undulatis, callis laminaribus parallelis et proximis discrepans.

Hierba epífita, simpodial, con rizomas cortamente rastreros, no ramificada, hasta 27 cm de alto. **Raíces** basales, carnosas, delgadas, blancas, 0.5-1.7 mm de grosor. **Tallo** sencillo, tipo caña, producido cerca de la base del tallo anterior, terete en la base, gradualmente lateralmente comprimido hacia el ápice, algo flexuoso, 6.5-13 x 0.2-0.75 cm. **Hojas** 3-4, distribuidas a lo largo del tallo, dísticas, la basal generalmente más pequeña; vainas tubulares, lateralmente comprimidas, algo infundibuliformes en seco, finamente estriadas, 15-25 x 4.8-9.5 mm; lámina lanceolada a oblongo elíptica, ápice desigualmente bilobado, margen entero, coriáceas, 1.5-7.5 x 0.8-2.2 cm. **Bráctea espatácea** 1, obovada, redondeada, margen entero, rugosa en seco, cubriendo parcial a totalmente el pedúnculo, 30-40 x 10-16 mm. **Inflorescencia** apical, pauciflora, ligeramente arqueada, 10.5-15 cm de largo; pedúnculo alargado, delgado, lateralmente aplanado, desprovisto de brácteas, 4-5 cm de largo. **Brácteas florales** muy pequeñas, casi obsoletas, triangulares, agudas, abrazadoras, 1 mm de largo. **Flores** 3-5, simultáneas, resupinadas, brillantes, color amarillo verdosas a café verdosas o rojizas, labelo ocasionalmente con difuminaciones café rojizas, columna verde; sin datos de fragancia. **Ovario** terete, delgado, liso, no inflado, 19-23 mm de largo. **Sépalos** libres, subagudos, diminutamente apiculados, margen entero y extendido; el **dorsal** extendido, subobtrulado, 6-nervado, 14-19 x 6.8-8.6 mm; los **laterales** entreabiertos, elípticos, oblicuos, 5-nervados, 15-20 x 8.9-10 mm. **Pétalos** entreabiertos, lineares, redondeados, margen entero, 1-nervados, 14-16 x 1-2 mm. **Labelo** unido a la columna, incipientemente trilobado, cuneado, margen entero, 18.5 x 14.8 mm; bicalloso, los callos prominentes, laminares, muy delgados, paralelos, de unos 2 x 3 mm, arqueados hacia el centro en posición natural; lóbulos laterales incipientes, transversalmente hemielípticos, 0.6 x 3.4 mm; lóbulo medio flabelado, 15.5 x 14.8 mm, ápice emarginado, bilobado, con un apículo grueso y redondeado en el centro, los lóbulos redondeados. **Columna** gruesa, ligeramente arqueada en la base, 10 mm de largo. **Clinandrio** corto, margen entero. **Antera** transversalmente elíptica con una quilla central engrosada, 4-locular. **Polinios** 4, obovoides, desiguales, el par interior más pequeño, formando un ángulo recto y delgado en la esquina apical interior; caudículas suaves y granulosas, algo mas largas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** ausentes. **Nectario** poco profundo, sin traspasar el perianto, amplio, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial **herb**. **Roots** basal, fleshy, thin. **Stem** simple, cane-like, produced from near the base of the previous stem, terete at the base, progressively laterally compressed above, somewhat flexuose. **Leaves** 3-4, distributed throughout the stem, sheaths tubular, laterally compressed, somewhat infundibuliform when dry; blade lanceolate to oblong-elliptic, unequally bilobed, coriaceous. **Spathaceous bract** 1, obovate, rounded. **Inflorescence** apical, few-flowered, somewhat arcuate. **Floral bracts** very small, triangular. **Flowers** 3-5, simultaneous, resupinate, color greenish yellow to greenish brown or red; lip sometimes suffused with reddish brown, column green. **Ovary** terete, not inflated. **Sepals** free, subacute, minutely apiculate, margin entire; **dorsal** spreading, subobtrullate, 6-veined; **laterals** elliptic, oblique, 5-veined, partly spreading. **Petals** partly spreading, linear, rounded, 1-veined. **Lip** united to the column, cuneate, scantly 3-lobed, margin entire, bicallose, the prominent calli laminar, parallel, arched towards the center in natural position; lateral lobes very shallow, widely elliptic; midlobe flabellate, apex emarginate with a wide fleshy apicule. **Column** thick, slightly arched at the base. **Clinandrium hood** short, entire. **Anther** transversely elliptic, with a central thickened keel. **Pollinia** 4, obovoid, unequal, the inner pair smaller, with the inner edge forming a right angle, and thin. **Rostellum** apical, slit. **Nectary** shallow, without surpassing the perianth, wide.

OTHER SPECIMENS: ECUADOR: Loja: Jimbura to Zumba, 2800 m, 21 II 1986, *Embree 37*, MO! Between Jimbura and Sumba, 2800 m, 2800 m, 21 II 1986, *Hirtz 2870*, QCNE! RPSC! **PERU: Amazonas:** Luya, above Leimebamba, 3500, 18 VI 1969, *Hutchison & Bennett 397*, SEL! Cerros Calla Calla, above Leimebamba, 2400 m, 26 III 1964, *Hutchison & Bennett 4565*, UC! **Piura:** Ayabaca, in mountains above Yanchala, 3100 m, 15 XI 1992. *Bennett. 5894*, USM. Ayabaca, *Stuempfle 1*, HB!

OTHER RECORDS: Bennett, D. E. & E. A. Christenson, 1993. As *Epidendrum orbiculatum* C. Schweinf. in **Icones Orch. Peruviarum** 52. 1993. Illustration based on *D. Bennett et al. 5894.* Isaías, R. 2000. **Orchids of Peru, N° 1**, CD-ROM, photograph under *Epidendrum sp.*, without locality.



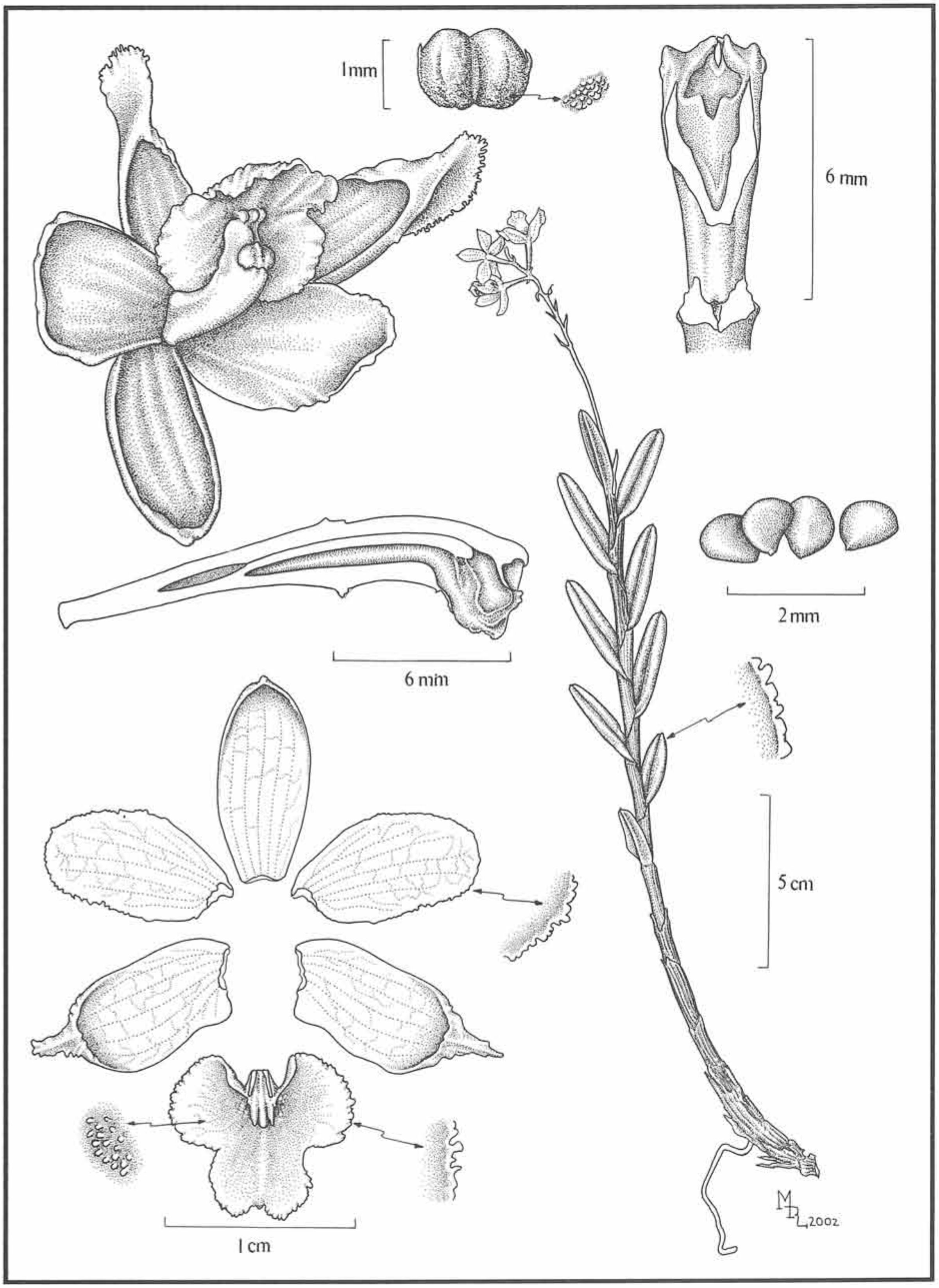
DISTRIBUTION AND ECOLOGY: Known only from the border area between Jimbura, (Loja) Ecuador and Ayabaca, (Piura) Peru, and east towards the Amazon, above Leimebamba; epiphytic in cloud forest, between [1800?] 2800-3500 m. Flowering between November and June.

RECOGNITION: *Epidendrum kymatochilum* belongs to the Megalospathum Group, Cupreum Subgroup, recognized by the wide, single, semiovate spathe, the erect stems with 3-5 coriaceous leaves, and few resupinate flowers. The species is recognized by the large flowers, sepals 14-19 mm long, the cuneate, flabellate, lip with a pair of incipient, basal hemicircular lobes, their margin undulate and the pair of laminar calli. It resembles *Epidendrum orbiculatum* closely, but this species has a suborbicular lip, somewhat wider than long, the margin entire, and is found in southern Peru, near Cuzco. *Epidendrum cupreum* F. Lehm. & Kraenzl. has smaller flowers, the sepals 10 mm long, and the lip ecallose; this species is distributed along the eastern slope of the Andes from southern Colombia to southern Ecuador.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek κυματισω- undulate, and χειλος- lip, in reference to the undulate margin of the base of the lip.

Authors: E. Hágsater & C. H. Dodson **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM LACINIITROPIS Hágsater

Plate 751

EPIDENDRUM LACINIITROPIS Hágsater, *sp. nov.*

Type: PERÚ: Amazonas: Chachapoyas, Leymebamba, a 2 km de la Laguna de los Cóndores, ruta hacia Leymebamba, 2700-2950 m, 18 August 1998, ***V. Quipuscoa S., A. Sagástegui A., S. Leiva G. & M. Bejarano C. 1334.*** Holotype: USM! (Illustration voucher). Isotype: AMO!

Epidendro crasso C. Schweinf. simile sed foliis angustioribus, sepalis carinam prominentem margine laciniatam ferentibus, petalis latioribus ellipticis primum visum 7-nervatis differt.

Hierba epífita, erecta, no ramificada, 22-29 cm de alto. **Raíces** basales, carnosas, delgadas, 1-1.3 mm de grosor. **Tallos** sencillos, tipo caña, teretes, erectos, rectos, de 13-20 x 0.25-0.38 cm. **Hojas** 5-9, distribuidas a lo largo de la mitad apical del tallo, alternas, equidistantes; vaina tubular, estriada y finamente rugosa, hasta 2.3 cm de largo; lámina oblonga a oblongo lanceolada, ápice redondeado, apiculado, subcoriácea, rugosa, margen crenado, 1.6-3.5 x 0.6-0.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, erecta, el raquis ligeramente arqueado, 9.5-10 cm de largo; pedúnculo terete, recto, liso, provisto en la parte media basal de una bráctea semejante a las florales, triangular, acuminada, abrazadora, 9 mm de largo. **Brácteas florales** de más de la mitad del largo del ovario, gradualmente más pequeñas hacia el ápice, triangulares, acuminadas, uninervadas, 3-8 mm de largo. **Ovario** terete, liso, no inflado, 10 mm de largo. **Flores** 16-18, simultáneas, no resupinadas, de color rojo, sin datos de fragancia. **Sépalos** extendidos, libres, oblongos, redondeados, 5-nervados, margen entero, 10-12.5 x 4.6-5.3 mm; los **laterales** con una quilla dorsal apical prominente, que se prolonga más allá del ápice, laciniada. **Pétalos** extendidos, libres, elípticos, obtuso redondeados, 3-nervados, las nervaduras laterales ramificadas desde la base dando la apariencia de ser 7-nervado,margen eroso, 10 x 5.1 mm. **Labelo** unido a la columna, trilobado, base cordada, superficie escasamente papilosa, margen eroso, 8.4 x 9.4 mm, los lóbulos de tamaño semejante; bicalloso, provisto de una quilla intercallosa, delgada, roma, que se prolonga a la altura del ápice de los callos; lóbulos laterales semiorbiculares, redondeados, 3.8 x 4.8 mm; lóbulo medio transversalmente elíptico, ápice retuso, formando dos lobos redondeados, 3.5 x 5.3 mm. **Columna** ligeramente arqueada, delgada, 6 mm de largo. **Clinandrio** corto, entero. **Antera** reniforme, 4-locular, la superficie finamente papilosa. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando la tercera parte del ovario, delgado, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, terete, erect. **Leaves** 5-9, distributed along the apical half of the stem; sheaths tubular, striated and finely rugose, blade oblong to oblong-lanceolate, apex rounded, apiculate, subcoriaceous, rugose, margin crenate. **Inflorescence** apical, racemose, erect, peduncle terete, with a triangular, acuminate bract near the base. **Floral bracts** more than half the length of the ovary or progressively shorter, triangular, acuminate. **Ovary** terete, not inflated. **Flowers** 16-18, simultaneous, non-resupinate, red. **Sepals** spreading, free, oblong, rounded, margin entire, 5-veined; the laterals with a prominent dorsal keel surpassing the apex, the margin laciniate. **Petals** spreading, free, elliptic, obtuse to rounded, margin erose, 3-veined, with the lateral veins branching so as to appear 7-veined. **Lip** united to the column, 3-lobed, base cordate, surface scarcely papillose, margin erose, lobes subequal in size; lateral lobes semi-orbicular, rounded; mid-lobe transversely elliptic, apex retuse, forming two rounded lobes. **Column** slightly arching. **Clinandrium hood** short, entire. **Anther** reniform, 4-celled, minutely papillose. **Pollinia** 4, obovoid, laterally flattened, subequal. **Rostellum** apical, slit. **Nectary** penetrating one-third of the ovary, thin, not ornamented.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Found in northern Peru, between 2700 and 2950 m on the Cordillera Oriental, east of the Marañón, in the District of Leimebamba, near the Laguna de Los Cóndores, epiphytic. Flowering in August.

RECOGNITION: *Epidendrum laciniitropis* is closely related to *Epidendrum crassum* both of which have a sympodial habit, simple stems, the inflorescence longer than the leaves, erect and without a spathe. The new species has red flowers, prominently keeled lateral sepals, with the keel extending beyond the apex of the blade and the margin laciniate; the petals are about as wide as the sepals, elliptic, with the apex rounded to obtuse, and they appear 7-veined, due to the much branched lateral veins. In *Epidendrum crassum* the sepals, have smaller keels and the margin entire; the petals are narrower than the sepals, oblanceolate, very narrow towards the base; that species is found in southern Peru, east of Cuzco.

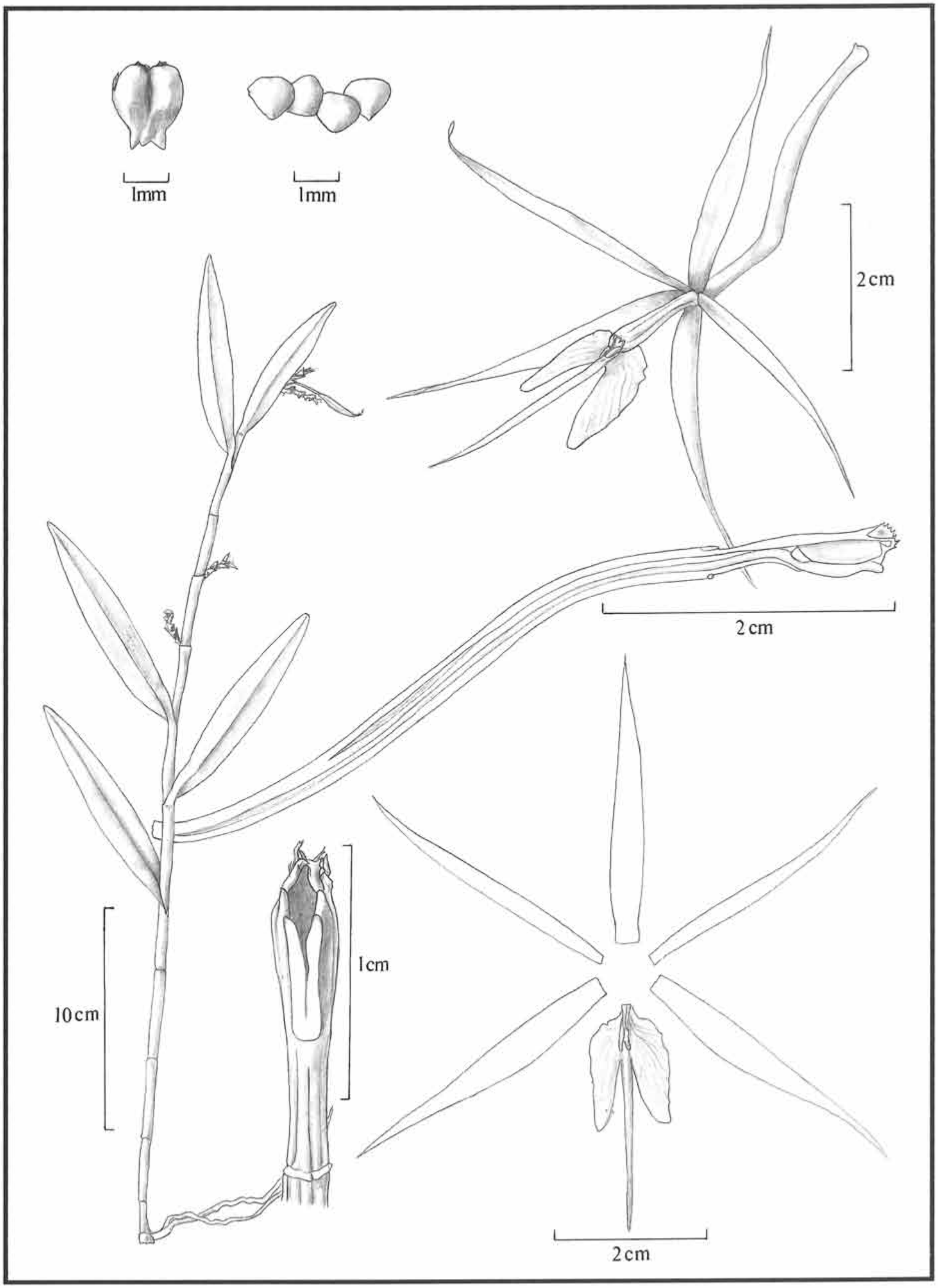


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the prominent laciniate keels of the sepals, from the Latin *laciniatus* margin slashed into narrow divisions with taper-pointed incisions, and the Greek τρπις- the keel of a ship.

Authors: E. Hágsater & E. Santiago Illustrator: M. López R. Editors: E. Hágsater & L. Sánchez S.

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EPIDENDRUM LATERINOCTURNUM Hágsater

Plate 752

EPIDENDRUM LATERINOCTURNUM Hágsater, *sp. nov.*

Type: COLOMBIA: [Nariño:] Barbacoas, ***[F. C. Lehmann] 25.*** Holotype: W 6382! (Illustration voucher).

Epidendro nocturno Jacq. simile sed inflorescentia apicali et laterali, caule deorsum tereti, sursum ancipitio et tenui recedens.

Hierba epífita, cespitosa, de 50 cm de alto. **Raíces** basales, carnosas, 2 mm de grosor. **Tallos** sencillos, teretes abajo, ancipitosos arriba, rectos, 41 x 0.25-0.4 cm. **Hojas** 8, distribuidas en los dos tercios apicales del tallo, coriáceas; vaina tubular, las de arriba lateralmente comprimidas, 15-37 x 3.5-4.6 mm; lámina elíptica, ápice angostamente bilobado, carinada, margen entero, 8-11.5 x 1.4-1.8 cm. **Bráceta espatácea** ausente. **Inflorescencias** apicales y laterales frente a las láminas foliares en los 2/3 apicales del tallo, la apical pluriracemosa, las laterales racemosas, dísticas, produciendo una flor a la vez, florece durante varios años; raquis flexuoso. **Bráctea floral** mucho más corta que el ovario, triangular, aguda, abrazadora, 3-4 x 3 mm. **Ovario** terete, 40 mm de largo. **Flores** una a la vez, (cuando hay dos, de racimos diferentes), sucesivas, resupinadas, sin datos de color ni fragancia. **Sépalos** extendidos, libres, linear lanceolados, agudos, margen entero, revoluto, 37 x 4-5 mm. **Pétalos** extendidos, libres, linear lanceolados, acuminados, margen entero, revoluto, 36 x 2.4 mm. **Labelo** unido a la columna, trilobado, 28 x 10.5 mm; bicalloso, callos laminares, prominentes; unicarinado, la carina obsoleta; lóbulos laterales oblicuos, semiovados, obtusos, margen entero, de la mitad del largo del lóbulo medio, 5 x13.5 mm; lóbulo medio linear, acuminado, entero, 22 x 1.1 mm. **Columna** recta, 12.3 mm de largo. **Clinandrio** prominente, profundamente dentado. **Antera** reniforme, ápice tridentado, 4-locular. **Polinios** 4, obovoide-triangulares, lateralmente comprimidos, semejantes. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/5 del largo de la cavidad. **Nectario** penetrando todo lo largo del ovario, no ornamentado. **Cápsula** no vista; la cavidad del ovario centrada y ocupando 1/3 del pedicelo.

Caespitose, epiphytic **herb**. **Stems** terete below, ancipitose above, thin. **Leaves** 8, distributed throughout the apical 2/3 of the stem, elliptic, narrowly bilobed, about six times longer than wide. **Inflorescence** apical and lateral from the upper nodes of the stem opposite the leaves, distichous, at least the apical pluriracemose, flowering over several years. **Ovary** 40 mm long. **Flowers** successive, one at a time. **Sepals** linear-lanceolate, acute. **Petals** linear-lanceolate, acuminate. **Lip** 3-lobed, bicallose, calli lamellate, lateral lobes obliquely semiovate, obtuse, half the length of the linear midlobe. **Column** straight. **Clinandrium hood** prominent, deeply dentate. **Nectary** penetrating the whole ovary.

OTHER SPECIMENS: None seen.

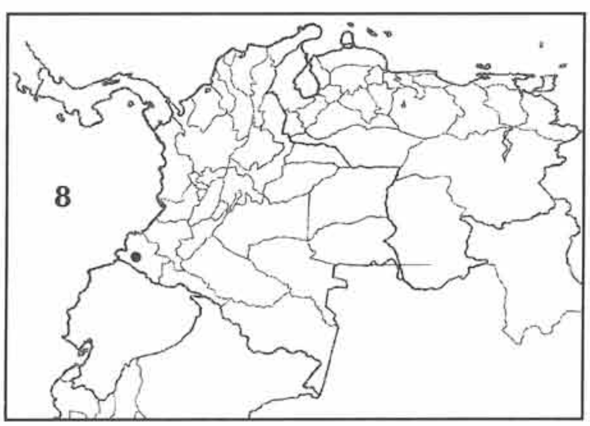
DISTRIBUTION AND ECOLOGY: Known only from the Pacific lowlands of the Department of Nariño, southwestern Colombia, around Barbacoas at about 150 m altitude. No other data available.

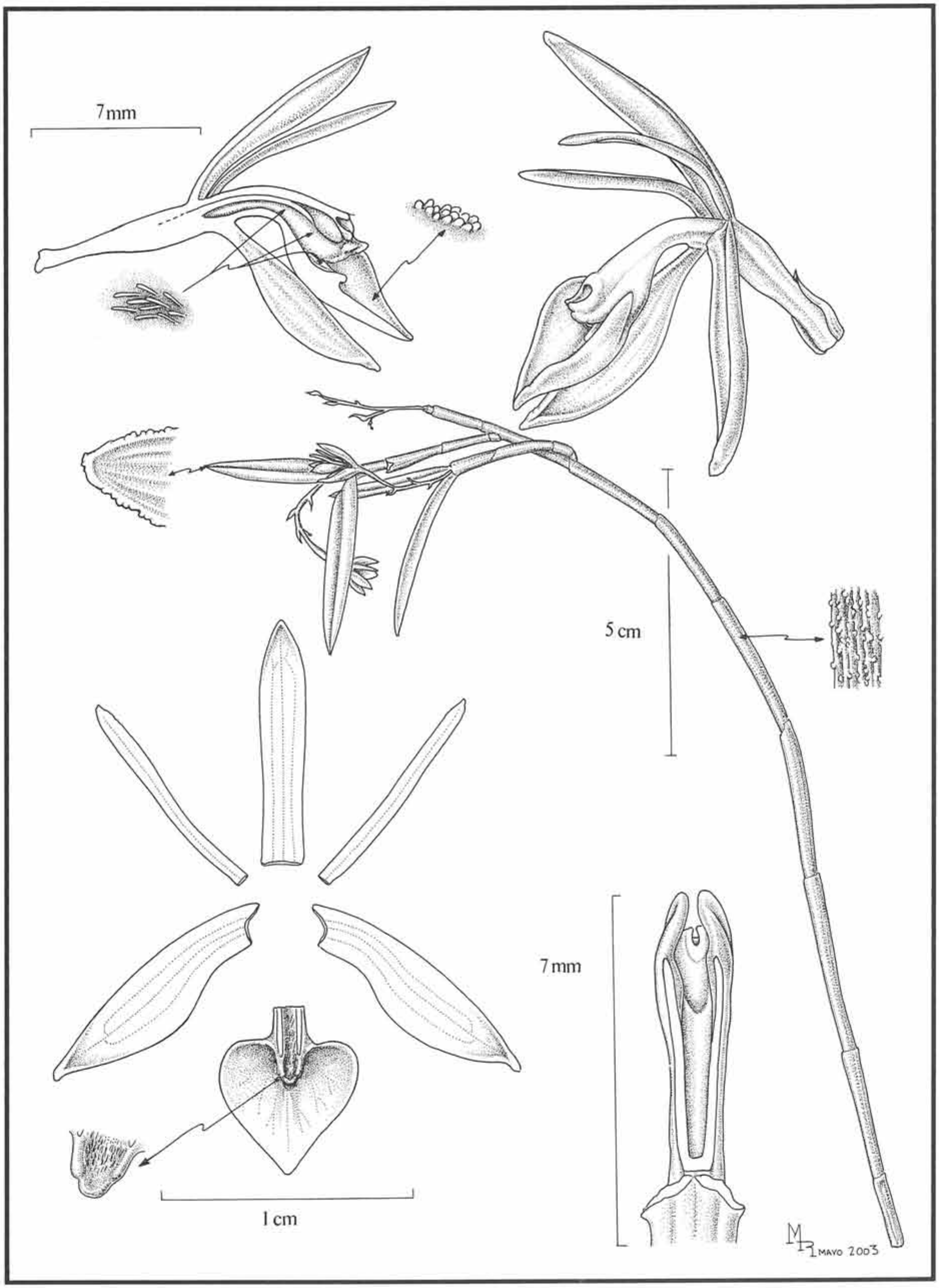
RECOGNITION: *Epidendrum laterinocturnum* belongs to the Nocturnum Group which is characterized by the caespitose habit, subcoriaceous leaves, usually apical, pluriracemose inflorescence, which produces one flower at a time from a bunch of racemes formed over time, each raceme formed slowly, the flowers white, star-shaped, the lip usually deeply 3-lobed, the midlobe acicular. The new species can be recognized by its apical and lateral inflorescences, the stems terete below, ancipitous above, though not widened, leaves narrow, less than 2 cm wide, distributed throughout the apical 2/3 of the stem, the ovary about as along as the sepals. *Epidendrum nocturnum* and all other species in that group are distinguished from this species by the exclusively apical inflorescence. *Epidendrum buenaventurae* F. Lehm. & Kraenzl. found in the same general area has fewer, longer, narrower leaves, the ovary 5-6 cm long, and only apical inflorescences, stems somewhat wider above.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: Lateral inflorescence flowering nocturnum, in reference to this distinguishing feature of the species, unique in the Nocturnum Group.

NOTE: Lateral inflorescences occur in various groups in *Epidendrum* and thus cannot be used as a distinguishing character to describe groups. The genus *Pleuranthium* Bentham was based on this character, and indeed the species in that group consistently appear to have apical and lateral inflorescences. *Epidendrum stamfordianum* Bateman usually flowers apically from an abortive new basal growth, and occasionally from the apex of a normal growth, but never laterally.





EPIDENDRUM LEMBOTYLOSUM Hágsater & Dodson

Plate 753

EPIDENDRUM LEMBOTYLOSUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Morona-Santiago: path campamento San Miguel (on road in construction Sigsig-Gualaquiza) to Gualaquiza, 9 April 1968, ***Gunnar Harling, G. Storm & B. Ström 8141.*** Holotype: GB! (Illustration voucher).

Epidendro caveroi D. E. Benn. & E. A. Christenson simile sed foliis longioribus et angustioribus, sepalis e columna liberis, in Aprile florens differt.

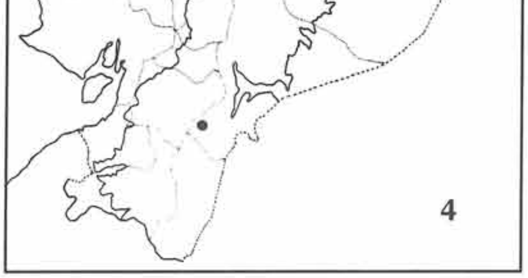
Hierba terrestre, suberecta, escasamente ramificada hacia la zona apical, de más de 25 cm de alto. **Raíces** no vistas. **Tallos** teretes, delgados, ramificados, el principal de más de 25 x 0.2-0.3 cm; las ramificaciones más cortas, 4-5 x 0.14-0.2 cm. **Hojas** del tallo principal numerosas, no vistas, las de las ramas 2-3, distribuidas hacia el ápice de éstas; vaina tubular, estriada, verrugosa, 7-30 x 1.4-3 mm; lámina linear lanceolada, aguda, margen apical irregularmente eroso crenado, 2.3-3.7 x 3-5 mm. **Bráctea espatácea** ausente. **Inflorescencia** apical, paniculada, la ramificación pequeña u ocasionalmente ausente, arqueado nutante, 1.5-2.5 cm de largo; pedúnculo, terete, filiforme, desprovisto de brácteas, 2-3 mm de largo; raquis recto. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares, agudas, abrazadoras, 2-4 mm de largo. **Flores** 3-6 por racimo, sucesivas, 1 abierta a la vez, color pardo purpúra rojizo; sin datos de fragancia. **Ovario** corto, terete, delgado, ligeramente inflado hacia la mitad apical, no ornamentado, 7-10 mm de largo. **Sépalos** entreabiertos, libres, agudos, apiculados, 3-nervados, margen entero; el **dorsal** oblongo, 9.4 x 1.8 mm, los **laterales** oblongos elípticos, oblicuos, 10.3 x 2.8 mm. **Pétalos** entreabiertos, libres, lineares, redondeados, 1-nervados, margen entero, 9 x 0.7 mm. **Labelo** unido a la columna, entero, en aspecto general cordiforme, agudo, truncado en la base, margen entero, carnoso, algo cóncavo sin abrazar el ápice de la columna, diminutamente papiloso hacia la zona apical, 5.2 x 5.4 mm; unicalloso, el callo oblongo, cóncavo y pubescente en centro. **Columna** corta, arqueada, obcónica, ápice con un par de dientes laterales agudos, 7 mm de largo. **Clinandrio** reducido, entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** corto, sin traspasar el perianto, pubescente frente a la cavidad estigmática. **Cápsula** no vista.

Terrestrial, suberect, scarcely branching **herb. Stem** terete, thin, the main stem branching near the apex. **Leaves** numerous on the main stem, 2-3 on the branches, distributed towards the apex, sheath tubular, striated, verrucose; blade on the branches linear-lanceolate, acute, apical margin irregularly erose-crenate. **Inflorescence** apical, paniculate, the branch short and occasionally lacking and thus racemose, arching, nutant; peduncle terete, filiform, rachis straight. **Floral bract** much shorter than the ovary, narrowly triangular, acute. **Flowers** 3-6 per raceme, successive, 1 open at a time, reddish brown-violet. **Ovary** short, terete, thin, slightly inflated towards the apical half. **Sepals** partly spreading, free, acute, apiculate, 3-veined, margin entire, the **dorsal** oblong, **laterals** oblong-elliptic, oblique. **Petals** partly spreading, free, linear, rounded, 1-veined, margin entire. **Lip** united to the column, entire, cordiform, acute, base truncate, margin entire, fleshy, somewhat concave in natural position without embracing the column, minutely papillose towards the apex; the callus oblong, concave, pubescent in the middle. **Column** short, arched, dilated towards the apex, terminating in a pair of acute lateral teeth. **Clinandrium hood** reduced, entire. **Rostellum** subapical, slit. **Nectary** short, not penetrating the ovary, pubescent in front of the stigmatic cavity.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the eastern Andes in southern Ecuador, at above 3000 m altitude. Flowering in April.

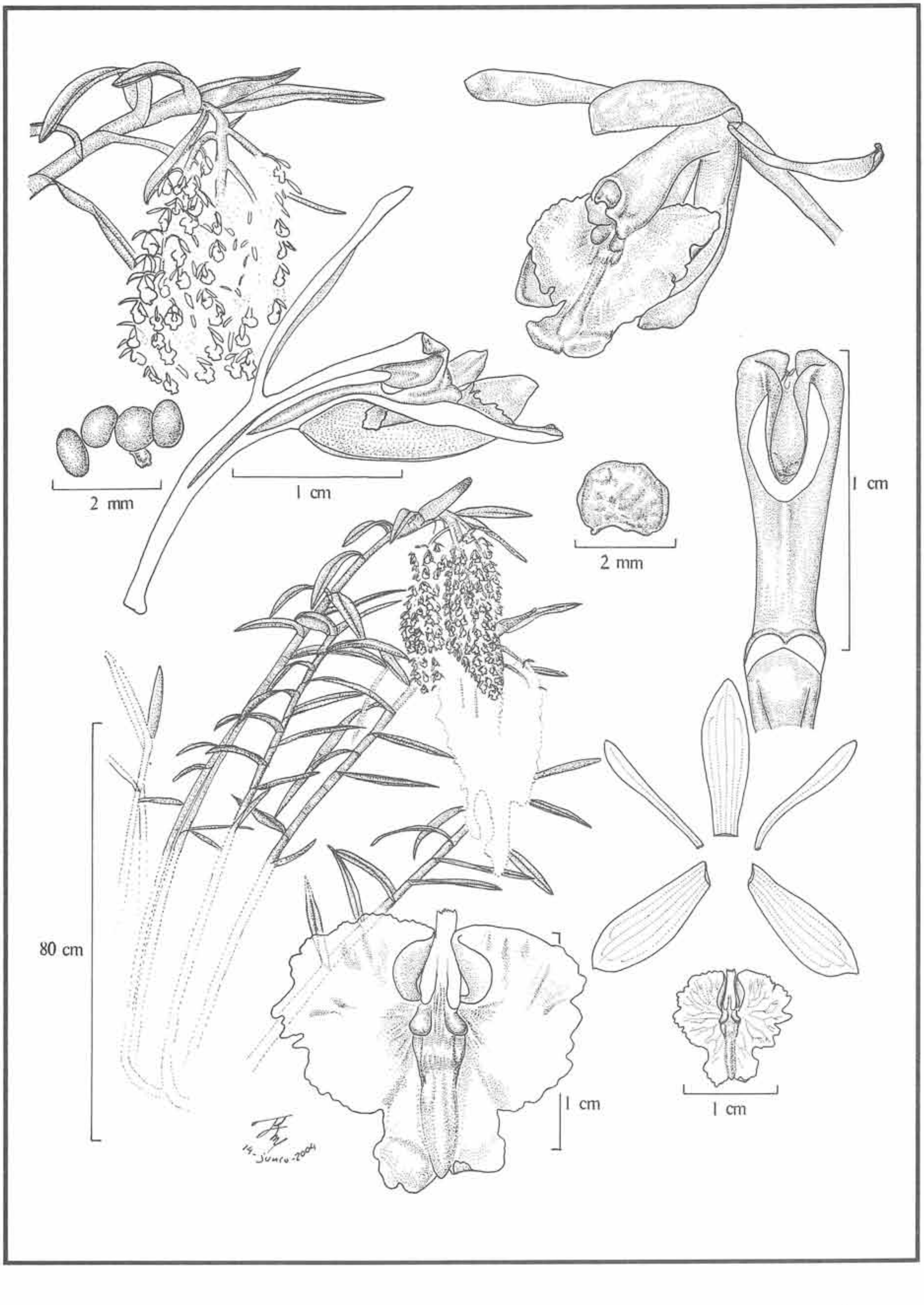
RECOGNITION: *Epidendrum lembotylosum* belongs to the Elleanthoides Group, Rhombochilum Subgroup, which is characterized by the thin, branching habit, narrow, short, subcoriaceous leaves with a crenulate margin and unequally bilobed apex, racemose, subdistichous, short inflorescence, with successive flowers, the entire lip embracing the column. The species is recognized by the relatively large, successive, reddish brown-violet flowers, the cordiform lip which is somewhat concave but does not embrace the column, and the oblong, concave, pubescent callus, flowering in April. The Peruvian *Epidendrum caveroi* from Condorcanqui, across the Nangaritza-Zamora River is florally quite similar, but the leaves are elliptic, acute and short, about as wide as long, the flowers slightly larger, the sepals being 12-13 mm long, and the lateral sepals somewhat joined to the ventral surface of the column; it flowers in August. *Epidendrum spasmosum* Hágsater & Dodson has non-resupinate flowers, white with the apices of the sepals pink to the whole flower greenish purple, the flowers are tightly cramped, with the lip embracing the column to leave only a round aperture through which the column may be reached for pollination, with subquadrate, erose lateral lobes of the lip and a small triangular apical lobe; the petals are linear to linear-oblanceolate, with the upper margin sinuous. *Epidendrum golondrinense* Hágsater & Dodson has a similar habit, but somewhat different, more numerous (up to 13), smaller flowers (sepals 3.8 mm long), the lip 3-lobed, with the lateral lobes smaller than the midlobe. *Epidendrum rhombochilum* L. O. Williams is recognized by the triangular lip, two, lentil-shaped pollinia slit longitudinally down one side and lanceolate dorsal sepal.



4

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek λεμβος- boat, and τυλος- callus, in reference to the boat-shaped callus.



EPIDENDRUM LESTERI Hágsater & Dodson **Plate 754**

EPIDENDRUM LESTERI Hágsater et Dodson, *sp nov.*

Type: ECUADOR: Zamora-Chinchipe: Zumba: Camino Zumba a Jimbura, a 52 km de Zumba, pasando San Andrés y La Quebrada Troya, 4°47´S 79°19´W, 2200 m, epiphytic, 20 January 2004, ***E. Hágsater & Lester Lapo 14101.*** (Illustration voucher). Holotype: QCNE! Isotype: AMO!

Epidendro orthoclinio Hágsater & Dodson simile sed foliis angustioribus, inflorescentia nutanti gravi densiflora, floribus majoribus ex rubro pallido viridulis, petalis rotundatis, clinandrio recto brevi ad marginem integro recedit.

Hierba simpodial, epífita, suberecta, 80-150 cm de alto. **Raíces** basales, carnosas, gruesas. **Tallos** sencillos, tipo caña, teretes, gruesos, 80 x 1.8 cm. **Hojas** 9-13, distribuidas en los 2/3 apicales del tallo, dísticas, extendidas, algunas recurvadas, coriáceas; vainas tubulares, estriadas, teñidas de rojizo, 3-9 x 0.9-1.8 cm; lámina angostamente lanceolada, aguda, con una quilla dorsal baja, verde en el haz a levemente teñida de rojizo en el ápice y en el envés, lisa, margen entero, 8-20 x 1.8-3.3 cm. **Bráctea espatácea** 1, conduplicada, lanceolada, subaguda, margen entero y ligeramente involuto, teñida en su totalidad de rosado rojizo, 12.7-13.5 cm de largo. **Inflorescencia** apical, paniculada, pesada, con 4-5 racimos basales muy densos, nutante, 36 cm de largo; pedúnculo, corto, terete, grueso, recto, 4 cm de largo; con una bráctea en la base de cada racimo, progresivamente más corta, la mayor de unos 10 cm de largo; raquis oculto en su totalidad por las flores. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 2-3 mm de largo. **Flores** 25-70 por racimo, simultáneas, verdosas, fuertemente teñidas de rojizo borgoña pálido; fragancia tenue. **Ovario** corto, terete, delgado, no inflado, no ornamentado, 8-13 mm de largo. **Sépalos** libres, entreabiertos, oblanceolados, redondeados, diminutamente apiculados, 5-nervados, margen entero, 16-16.5 x 5-5.5 mm; los **laterales** ligeramente oblicuos. **Pétalos** libres, entreabiertos, linear oblanceolados, redondeados, 1-nervados, ligeramente oblicuos, margen entero, 15.5 x 2 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, margen eroso crenado, 12 x 12.5 mm; bicalloso, los callos esféricos, pequeños; disco provisto de 3 quillas romas, lisas, bajas, el par lateral justo debajo de los callos, muy corto, desvaneciendose antes de llegar a la base del lóbulo medio; la quilla central ancha, alargada hasta el ápice del lóbulo medio; lóbulos laterales subreniformes, 5.5 x 8 mm; lóbulo medio rectangular, ápice truncado, algo bilobado, cortamente apiculado, 4 x 6 mm. **Columna** recta, delgada en la base y ancha hacia el ápice, 10 mm de largo. **Clinandrio** recto, corto, margen entero. **Antera** reniforme, 4-lócular. **Polinios** 4, obovoideos; caudículas del mismo largo que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 del largo de la cavidad estigmática. **Nectario** corto, apenas penetrando el ovario, liso, delgado, no inflado. **Cápsula** no vista.

Epiphytic, suberect, sympodial **herb. Roots** basal, thick, fleshy. **Stems** simple, cane-like, terete, thick. **Leaves** 9-13, distributed throughout the apical 2/3 of the stems, distichous, spreading, some recurved, coriaceous; sheaths tubular, striated, reddish tinted; blade narrowly lanceolate, acute, with a low dorsal keel, dark green above, with the underside reddish, smooth, margin entire. **Spathaceous bract** 1, conduplicate, lanceolate, subacute, margin entire and slightly revolute, totally reddish pink. **Inflorescence** apical, paniculate, heavy, with 4-5 very dense-flowered, nutant racemes; peduncle short, terete, thick, straight; with a large bract at the base of each raceme, progressively shorter; rachis hidden by the flowers. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** about 70 per raceme, simultaneous, greenish, strongly tinged with pale burgundy-red; fragrance soft. **Ovary** short, terete, thin, smooth. **Sepals** free, partly spreading, oblanceolate, rounded, minutely apiculate, 5-veined, margin entire; the **laterals** slightly oblique. **Petals** free, partly spreading, linear-oblanceolate, rounded, 1-veined, slightly oblique, margin entire. **Lip** united to the column, 3-lobed, base deeply cordate, margin erose-crenate; bicallose, the calli spherical, small; disc provided with 3 low, smooth, rounded keels, the lateral pair just below the calli, very short, disappearing before reaching the base of the midlobe; the central keel wide, reaching the apical sinus; lateral lobes subreniform; midlobe rectangular, the apex truncate, somewhat bilobed, short-apiculate. **Column** straight, thin at the base, thickened towards the apex. **Clinandrium hood** straight, short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, caudicles as long as the pollinia. **Rostellum** apical, slit. **Nectary** short, barely penetrating the ovary, smooth, narrow.

OTHER SPECIMENS: PERU: Cajamarca: San Andrés Cutervo, 2550 m, 11 I 1990, *Díaz 3919*, MO!

DISTRIBUTION AND ECOLOGY: Known only from the Amazon slope of the Andes in the upper basin of the Marañón river in both Ecuador and Peru, epiphytic in wet cloud forest, at 2200-2550 m altitude. Flowering in January-February.

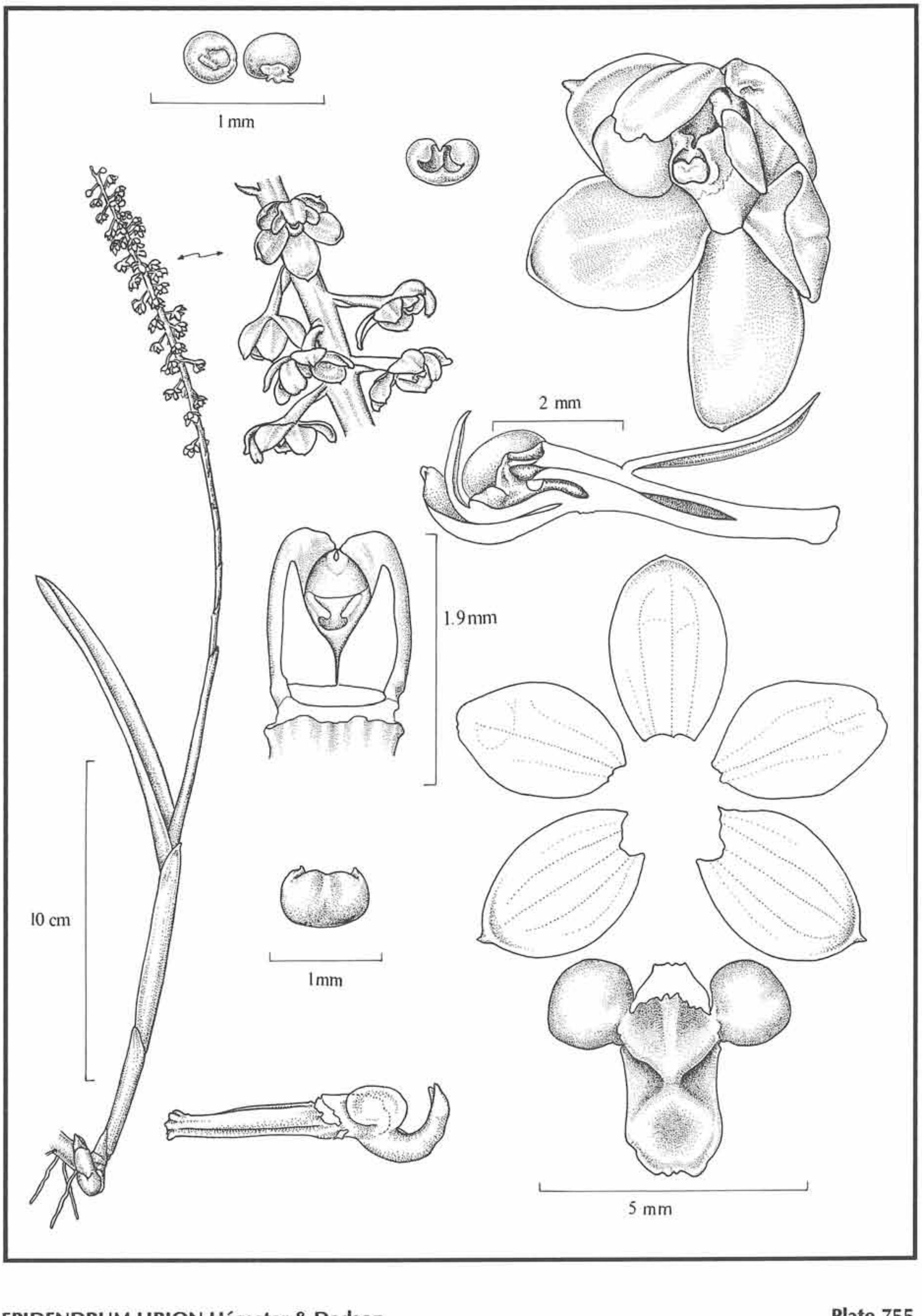


RECOGNITION: *Epidendrum lesteri* belongs to the Excisum Group and Subgroup which is characterized by the sympodial, caespitose habit, cane-like stems with numerous leaves, the inflorescence racemose or an open panicle with few, elongate branches, the 1-2 large spathaceous bracts at the base of the inflorescence, and the 3-lobed lip and medium sized flowers. The species is recognized by the terete stem, lanceolate, acute, dark green leaves with the underside reddish, the pink colored, subacute spathe, nutant, dense-flowered inflorescence branching near the base into several similar racemes, and the greenish, pale burgundy-red tinged flowers; the lip deeply cordate. It closely resembles *Epidendrum orthoclinium* which has narrower leaves, a more lax-flowered inflorescence, smaller, greenish yellow flowers, acute petals, and the clinandrium hood upturned, with the margin erose. *Epidendrum excisum* Lindl. has laterally flattened stems, an erect, lax-flowered paniculate inflorescence, the light yellowish-green flowers more or less tinged with copper. *Epidendrum tenuispathum* C. Schweinf. has a somewhat similar habit, with an erect, paniculate inflorescence, and the lip is wider than long.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Lester Lapo, of ECUAGENERA Ltda., caretaker of the greenhouses in El Pangui, who participated in the collection of the type.

Authors: E. Hágsater & C. H. Dodson **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM LIRION Hágsater & Dodson **Plate 755**

EPIDENDRUM LIRION Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Saraguro-San Lucas, 2600 m, in Elfin forest, col. 5 Nov. 1999, flowered in cult. 24 May 2001, ***E. Hágsater & C. H. Dodson 12294.*** Holotype: AMO! (Illustration voucher).

Epidendro caryophoro (Kunth) Rchb.f. simile sed caulibus unifoliatis, floribus non resupinatis cernuis, albidis cum columnae apice purpureo, segmentis subtilibus et latis discrepans.

Hierba epífita, cespitosa, 30-40 cm de alto. **Raíces** carnosas, 2.5 mm de grosor. **Tallo** producido del ápice del primer entrenudo del tallo anterior, a unos 12 mm de la base, tipo caña, ligeramente aplanado, de tres entrenudos, el apical ocupando más de la mitad del largo, 4-6 x 0.4-0.7 cm, cuando joven cubierto por vainas tornándose escariosas. **Hoja** solitaria, apical, angostamente elíptica, gruesamente coriacea, conduplicada y algo arqueada, ápice desigualmente bilobado; 8.7-13 x 1.6-2.0 cm. **Inflorescencia** apical, racemosa, erecta, multiflora, 23 cm de largo, el pedúnculo 13 cm de largo, con varias brácteas semejantes a las florales distribuidas a todo lo largo. **Bráctea espatacea** una, tubular, ancipitosa, los lados subparalelos, ápice agudo, 66 x 5 mm. **Bráctea floral** más corta que el ovario, triangular, aguda, 1.5-2.0 mm de largo. **Flores** >30, simultáneas, no resupinadas, orientadas hacia abajo, el ovario ligeramente retrorso, delicadas, blanco cremoso con el ápice de la columna morado, la base verde y la antera amarillo pálido; fragancia a cítrico, diurna. **Ovario** delgado, terete, 3-4 mm de largo. **Sépalos** casi extendidos, elípticos, cortamente apiculados, 5-nervados, margen entero, 4.0 x 2.7 mm; los laterales reducidos. **Pétalos** casi extendidos, elíptico subrómbicos, ápice truncado, 3-nervados, margen entero, 3.7 x 2.3 mm. **Labelo** trilobado, membranáceo, inflexo, 4.5 x 5.0 mm al extenderse; con un callo carnoso en "V" atravesando la base del lóbulo medio; lóbulos laterales orbiculares, 1.5 mm de diámetro; lóbulo medio rectangular, las esquinas redondeadas, 2.7 x 2.0 mm. **Columna** corta, gruesa, recta, 1.9 mm de largo. **Clinandrio** reducido, margen entero. **Antera** reniforme, bilocular. **Polinios** 2, lenticulares, no ornamentados, caudículas mucho más pequeñas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de un medio de la cavidad estigmática. **Nectario** corto, sin penetrar el ovario. **Cápsula** no vista.

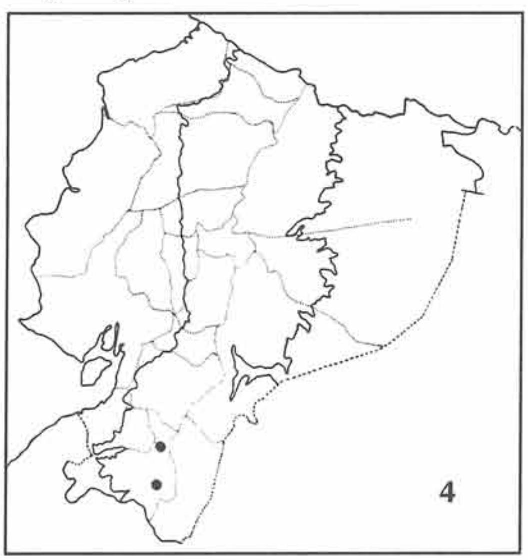
Epiphytic, caespitose **herb. Roots** fleshy. **Stem** cane-like, somewhat flattened, of three internodes, the apical one occupying more than half the length, when young covered by sheaths. **Leaf** solitary, apical, narrowly elliptic, thickly coriaceous, conduplicate, somewhat arquate, apex unequally bilobed. **Inflorescence** apical, racemose, erect, many-flowered. **Spathaceous bract** one, tubular, ancipitose, the sides subparallel, apex acute. **Floral bracts** very small, acute. **Flowers** >30, simultaneous, non-resupinate, oriented downward, the ovary somewhat retrorse, delicate, creamy white with the apex of the column purple, the base green, anther light yellow, fragrance citric. **Ovary** thin, terete. **Sepals** nearly spreading, elliptic, short-apiculate, 5-veined, the lateral veins reduced. **Petals** nearly spreading, elliptic-subrhombic, apex truncate, 3 veined. **Lip** three-lobed, membranaceous, inflexed, with a "V" shaped callus across the base of the midlobe; lateral lobes orbicular, midlobe rectangular with the corners rounded. **Column** short, thick, straight. **Clinandrium hood** reduced, entire. **Anther** reniform, bilocular. **Pollinia** 2, lenticular; caudicles smaller than pollinia. **Nectary** short, without penetrating the ovary.

OTHER SPECIMENS: ECUADOR: Loja: W slope of Nudo de Sabanilla, c. 8 km above Yangana on road to valladolid, 2300-2500 m, 2 IV 1985, *Harling 23513*, AMES! QCA! Nudo de Sabanilla, W slope c. 10 km above Yangana on road to Valladolid, 2500 m, 3 IV 1985, *Harling 23595*, GB! QCA! **Zamora-Chinchipe**: Eastern side of pass on road from Yangana to Valladolid, *Hirtz 2304*, RPSC! Ibid. *2348*, RPSC!

DISTRIBUTION AND ECOLOGY: Known from southern Ecuador, on the summit of the Andes from 2300 to 2600 m altitude. Epiphytic in Elfin forest with *Clusia sp.* Flowering from April to May.

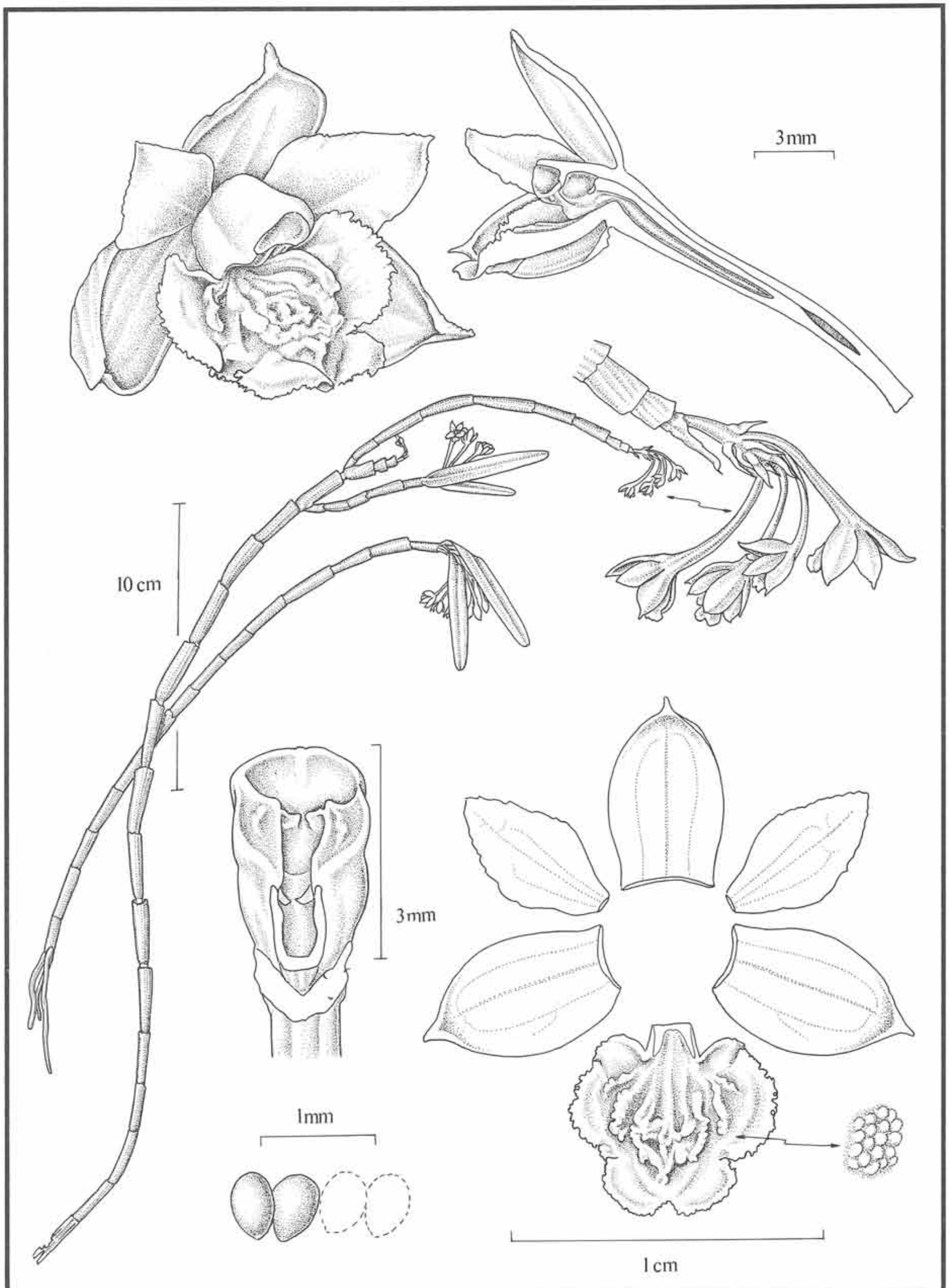
RECOGNITION: *Epidendrum lirion* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species has the same vegetative aspect of *Epidendrum parvilabre* and *Epidendrum coryophorum* (Kunth) Rchb.f. with the single, apical leaf very thick and coriaceous, the racemose, erect inflorescence with numerous lily-like, non-resupinate, white flowers facing downward, with the apex of the column purple, the sepals and petals elliptic and wide. The inflexed, membranaceous, three-lobed lip is quite unique, with its orbicular lateral lobes and rectangular midlobe. *Epidendrum coryophorum* has a fleshy finger-like midlobe and purple flowers. *Epidendrum parvilabre* has resupinate flowers with slender floral segments and the lip spreading with falcate lateral lobes. *Epidendrum mancum* Lindl. has non-resupinate flowers with narrow segments and the lip fleshy and reduced.

CONSERVATION STATUS: DD. Data deficient. The area where the type was collected was a small forest remnant, next to a narrow road along the ridge.



ETYMOLOGY: From the Greek λειριον- white lily, as the many hanging, small white flowers are reminiscent of lily of the valley; *muguet* in French.

Author: L. Sánchez S. **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM LOPHOTROPIS Hágsater & Dodson

Plate 756

EPIDENDRUM LOPHOTROPIS Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Tungurahua: NW slopes of Volcán Tungurahua below the refuge, 1°28'S 78°28'W, 2850-3150 m, 15 January 1988, ***U. Molau, B. Eriksen & M. Fredrikson 2483.*** Holotype: GB! (Illustration voucher).

Epidendro restrepoano A. D. Hawkes simile sed floribus minoribus aurantiacis pallidis, labello cum 7 carinis cristatis, cujus 3 centrales valde nodulosas sunt, distinguibile.

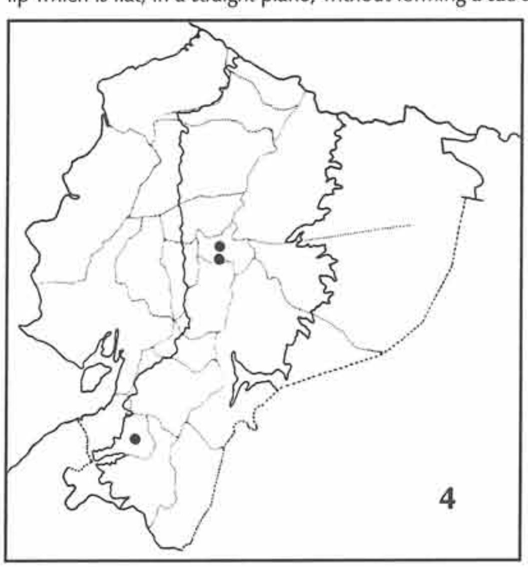
Hierba terrestre o epífita, ramificada hacia el ápice, erecta, de 21-40 cm de alto. **Raíces** basales, gruesas, blancas, 0.5-2 mm de grosor. **Tallos** tipo caña, teretes, rectos, de 21.5-34 x 0.25-0.45 cm, ramificados cerca del ápice, las ramas menores, 5-17 cm de largo. **Hojas** 8-11, distribuidas en los 2/3 apicales del tallo, caedizas con en tiempo, 2-3 persistentes en el ápice, alternas, subcoriáceas, erectas; vaina tubular finamente estriada y levemente rugosa cuando seca, 1.0-3.6 x 0.30-0.45 cm; lámina oblongo lanceolado, lisa, ápice subredondeado, ligeramente bilobado, con una quilla dorsal baja, margen entero, 3.5-7.1 x 0.5-0.9 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, en aspecto general subcorimbosa, ligeramente arqueado nutante, corta, 2.5 cm de largo; pedúnculo terete, delgado, liso, 4-10 mm de largo; provisto de una bráctea angostamente triangular, acuminada, abrazadora, 5 mm de largo; raquis abreviado, totalmente oculto por las brácteas florales, 5.5-10 mm de largo. **Brácteas florales** mucho más cortas que el ovario, angostamente triangulares, acuminadas, uninervadas, abrazadoras 3-4 mm de largo. **Flores** 10-15, resupinadas, simultáneas; color naranja pálido, sin datos de fragancia. **Ovario** terete, delgado, liso, no inflado, 9.5-17 mm de largo. **Sépalos** entreabiertos, libres, elíptico obovados, membranosos, diminutamente apiculados, 3-nervados, margen entero, dorsalmente ligeramente subpapilosos; 6.0-6.2 x 3.6-4.0 mm. **Pétalos** entreabiertos, libres, subrómbicos, membranosos, subagudos, 3-nervados, las nervaduras laterales cortas, margen eroso dentado en la mitad apical; 5.5 x 3 mm. **Labelo** unido a la mitad de la columna, trilobado, profundamente cordado, margen eroso, 5.7 x 6.6 mm; ecalloso; provisto con 7 quillas crestadas, las tres centrales fuertemente nodulosas, alargadas hasta la base del lóbulo medio, las laterales más cortas; lóbulos laterales hemielípticos, redondeados, 2.3 x 4.0 mm; lóbulo medio ancho y corto, bilobado, los lóbulos redondeados, anchos, 2.0 x 3.4 mm. **Columna** libre en la mitad apical, recta, corta, unida de manera oblicua su mitad basal al labelo, 3 mm de largo, ventralmente provista de alas rectas. **Clinandrio** corto, entero. **Antera** no vista. **Polinios** obovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** muy pequeños. **Nectario** largo, penetrando 1/2 del ovario, delgado, liso, muy ligeramente inflado justo detrás del perianto pero sin formar vesícula. **Cápsula** no vista.

Terrestrial and epiphytic, branching **herb. Roots** basal, thick. **Stems** cane-like, straight, branching near the apex, the branches shorter. **Leaves** 8-11, distributed throughout the apical 2/3 of the stem, the lower ones deciduous, subcoriaceous, erect; sheath tubular, minutely striated and somewhat rugose when dry; blade narrowly oblong-lanceolate, apex subrounded, somewhat bilobed,with a low dorsal keel, margin entire, smooth. **Inflorescence** apical, flowering only once, racemose, subcorymbose, somewhat arching-nutant, short; peduncle terete, thin, provided with one narrow, triangular, acuminate bract; abbreviated rachis completely hidden by the floral bracts. **Floral bracts** much shorter than the ovary, narrowly triangular, acuminate, 1-veined. **Flowers** 10-15, resupinate, simultaneous, dull orange. **Ovary** terete, thin. **Sepals** partly spreading, free, elliptic-obovate, membranaceous, minutely apiculate, 3-veined, incipient papillose, margin entire. **Petals** partly spreading, free, subrhombic, membranaceous, subacute, 3-veined, the lateral veins shorter, margin erose-dentate along the apical half. **Lip** united to the basal half of the column, 3-lobed, deeply cordate, margin erose; ecallose, provided with 7 crested keels, the 3 central keels strongly knobby, elongate to the base of the midlobe, the laterals shorter; lateral lobes rounded, midlobe wide and short, bilobed, the lobes rounded. **Column** straight, short, the basal half obliquely united to the lip, with a pair of involute wings. **Clinandrium hood** short, entire. **Rostellum** apical, slit. **Nectary** penetrating half the ovary, thin, somewhat dilated apically.

OTHER SPECIMENS: ECUADOR: El Oro: north of Salvias (east of Zaruma), 2100 m, 4 II 1993, *Dalström 1836*, SEL! **Tungurahua:** Road Patate to Leito to Llanganates Range, 3300 m, 12 IV 1985, *Hirtz* 2498, MO! Andes Quitensis, Tunguragua, *Spruce 5391*, W!

DISTRIBUTION AND ECOLOGY: Known only from central and southern Ecuador, on both sides of the Andes, at about 2100-3300 m altitude, on the Tungurahua volcano and south in the province of El Oro, terrestrial and epiphytic. Flowering from December to April.

RECOGNITION: *Epidendrum lophotropis* belongs to the Diothonea Group which is characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, with 1-10 thin, glabrous to erose keels, the column united to the lip from totally to obliquely to free, the anther reniform. The new species is recognized by the resupinate, dull orange flowers, the short, straight, column, basally united to the lip which is flat, in a straight plane, without forming a sac at the base, and has 7 crested keels, the 3 central ones strongly knobby. At a glance, the herbarium specimens look somewhat like those of *Epidendrum restrepoanum* has lip with 5-7 low, smooth, keels, the flowers scarlet red, the lip and column yellow, dorsally pustulate sepals. *Epidendrum eugenii* Schltr. but that species has violet flowers, a sac-like base of the lip and 3 simple, straight keels, the acuminate floral segments. *Epidendrum podocarpophyllum* Schltr. has a subreniform lip, 4 x 6 mm, 3-keeled, the flowers salmon red and salmon yellow.

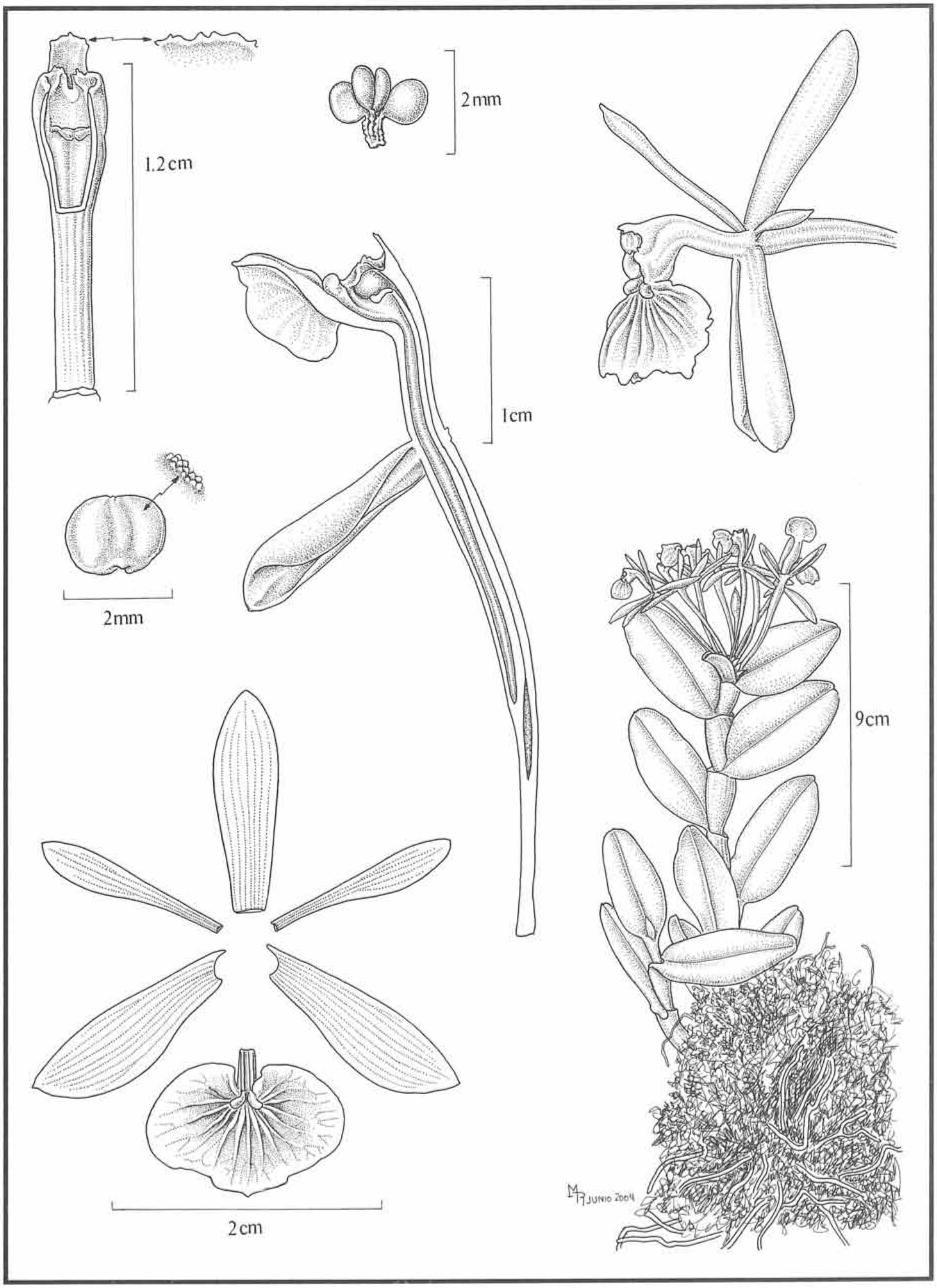


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek λοφος- crest, and τροπις- keel, in reference to the crested keels of the lip characteristic of this species.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM MACARENSE Hágsater & L. Sánchez **Plate 757**

EPIDENDRUM MACARENSE Hágsater *et* L. Sánchez, *sp. nov.*

Type: COLOMBIA: Meta: Sierra La Macarena, río Guayabero, ***J. M. Idrobo 8501.*** Holotype: COL! (Illustration voucher).

Epidendro sertorum Garay & Dunst. simile sed caulibus ancipitiis, foliis ovato-ellipticis, labello venis radiantibus incrassatis pluribus, ad apicem subtruncato, late obtuso, apiculato, columna arcuata, clinandrio prominenti subquadrato eroso differt.

Hierba epífita, simpodial, cespitosa, 19 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, filiformes, 0.5-1.2 mm de grosor. **Tallos** sencillos, tipo caña, ancipitosos, ligeramente flexuosos, 14 x 0.4-0.9 cm. **Hojas** 3-8, equidistantes a lo largo del tallo; vaina foliar ancipitosas, lisa, 1.3-1.8 cm de largo; lámina foliar ovado elíptica, ápice desigualmente bilobado, ligeramente carinada dorsalmente, verde, coriácea, 3.6-4.5 x 1.8-2.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical del tallo maduro, subcorimbosa, florece una sola vez, subsésil, pedúnculo muy reducido. **Brácteas florales** mucho más pequeñas que el ovario, ovadas, redondeadas, 3-4 mm de largo. **Flores** 9, simultáneas, resupinadas, verdes "color limón". **Ovario** terete, no inflado, no ornamentado, 30-40 mm de largo. **Sépalos** libres, extendidos, oblanceolados, subcoriáceos, glabros, 7-nervados, margen entero, revoluto,15-16 x 4.4-4.8 mm; el dorsal obtuso; los laterales ligeramente oblicuos, agudos. **Pétalos** extendidos, angostamente espatulados, obtusos, 3-nervados, las nervaduras laterales ramificados hacia la mitad, margen entero, 13-15 x 1.3-1.8 mm. **Labelo** unido a la columna, entero, cordiforme, base cordada, ápice subtruncado, anchamente obtuso, apiculado, 9-9.5 x 14-14.5 mm; bicalloso, los callos pequeños, algo alargados, divergentes; disco con muchas venas radiantes, engrosadas siendo más delgadas hacia el margen. **Columna** arqueada en la mitad apical, 10-12 mm de largo. **Clinandrio** prominente, subcuadrado, margen eroso. **Antera** subesférica, 4-locular. **Polinios** 4, obovoides, lateralmente aplanados; caudículas más cortas que los polinios, granulosas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** cerca de la mitad de largo de la cavidad estigmática. **Nectario** profundo, penetrando 2/3 del ovario, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb. Roots** basal, fleshy, filiform. **Stems** simple, cane-like, ancipitous, somewhat flexuous. **Leaves** 3-8, distributed throughout the stem; sheath ancipitous, smooth; blade ovate-elliptic, apex unequally bilobed, slightly carinate dorsally, green, coriaceous. **Inflorescence** apical, from the mature stem, subcorymbose, flowering only once, subsessile, peduncle much reduced. **Flowers** 9, simultaneous, resupinate, green. **Ovary** terete, smooth. **Sepals** free, spreading, oblanceolate, subcoriaceous, glabrous, , 7-veined, margin entire, revolute; the **dorsal** obtuse, the **laterals** slightly oblique, acute. **Petals** spreading, narrowly spathulate, obtuse, 3-veined, the lateral veins branching towards the middle, margin entire. **Lip** united to the column, entire, cordiform, base cordate, apex subtruncate, widely obtuse, apiculate; bicallose, the calli small, somewhat elongate, divergent; disc with many radiating, thickened keels, progressively thinner towards the margin. **Column** arching towards the apical half. **Clinandrium hood** prominent, subquadrate, margin erose. **Anther** subspherical, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles shorter than the pollinia, granular. **Rostellum** apical, slit. **Nectary** deep, penetrating 2/3 of the ovary, smooth.

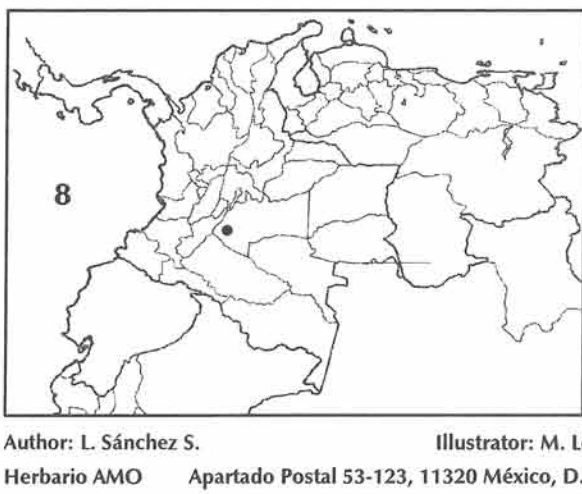
OTHER SPECIMENS: None seen.

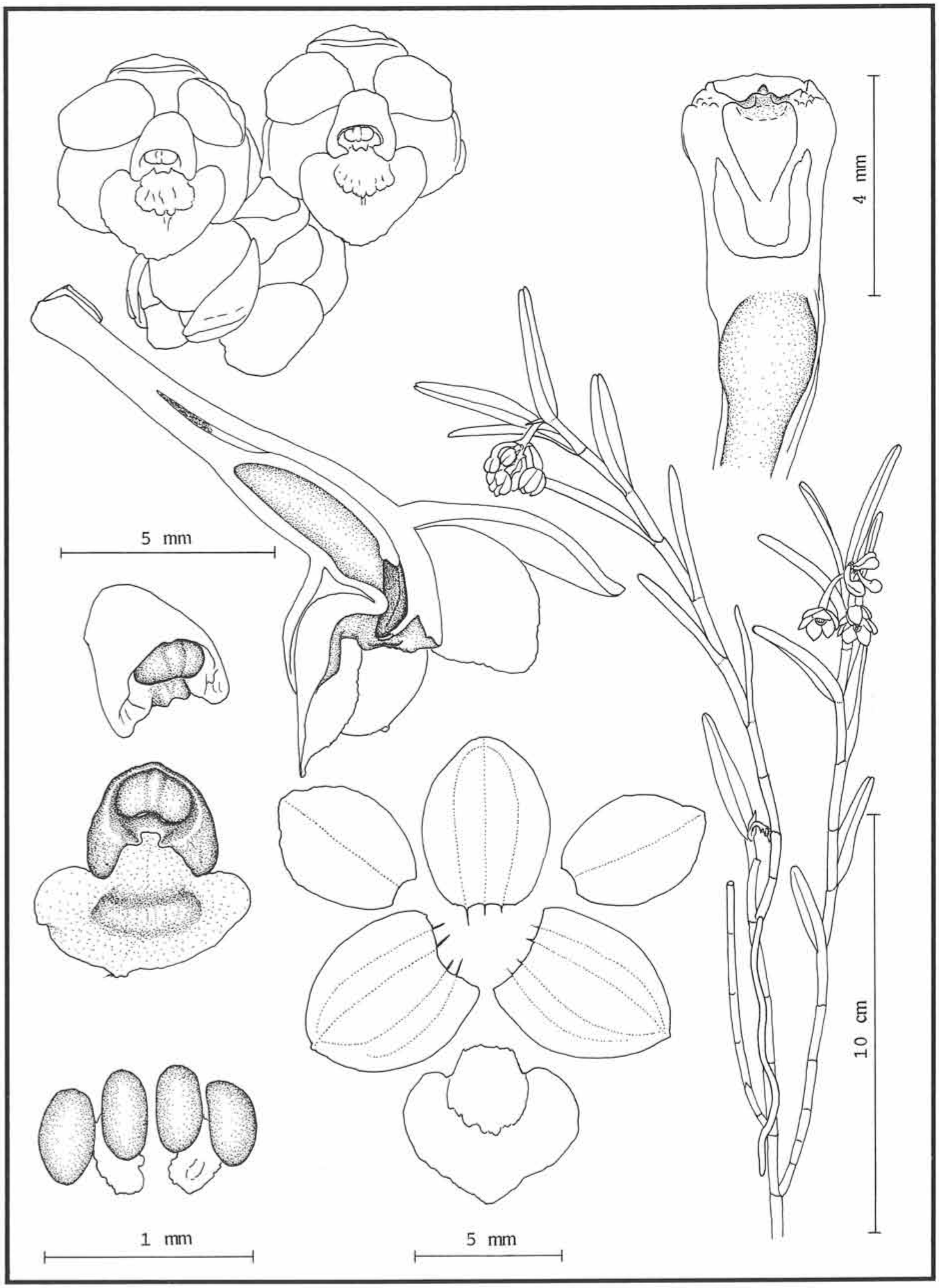
DISTRIBUTION AND ECOLOGY: Known only from the Sierra de La Macarena, Colombia. Epiphyte. Flowering in November.

RECONOCIMIENTO: *Epidendrum macarense* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish-green rarely white flowers. The new species is recognized by ancipitose stems, ovate-elliptic leaves, lip entire, subtruncate, widerly obtuse, disc with several prominent veins, arcuate column and clinandrium hood prominent, subquadrate. It is similar to *E. sertorum* from upper Orinoco in Venezuela and east of Colombia, but this has lateraly compressed stems, 4-6, elliptic leaves, stright column with clinandrium hood shorter and dentate.

CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: The epithet *"Macarense"* refers to Sierra La Macarena in Colombia, where the type specimen was collected.





EPIDENDRUM MELANOGASTROPODIUM Hágsater & Dodson **Plate 758**

EPIDENDRUM MELANOGASTROPODIUM Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Cotopaxi: Quevedo-Latacunga, km 97, pasando 1er. puente, antes del páramo, 13 October 1983, ***E. Hágsater, W. & B. Thurston & L. Latta 7608.*** Holotype: QCNE! Isotype AMO! (Illustration voucher).

Epidendro gastropodio Rchb. f. simile sed labello pulvinum amorphum truncatum aurantiacum ferenti, ecarinato, anthera et columnae apice plerumque nigro, segmentis floralibus late ellipticis et rotundatis recedit.

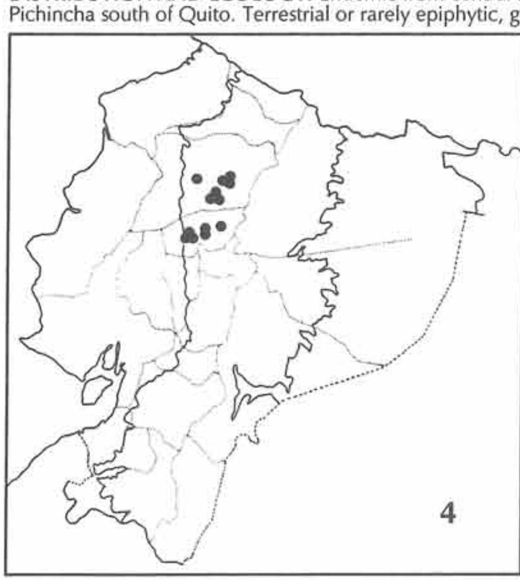
Hierba terrestre o raramente epífita, ramificada, de 12-40 cm de alto. **Raíces** basales en el tallo principal, escasas en la base de algunas ramificaciones, delgadas, blancas, 1-1.5 mm de grosor. **Tallos** ramificados a casi todo lo largo del tallo principal volviendo a ramificarse de los entrenudos apicales del tallo anterior, tipo caña, teretes, delgados, rectos; el principal 12-40 x 0.15-0.26 cm. **Hojas** del tallo principal no vistas, 5-8 en las ramificaciones, distribuidas en la parte media apical de los tallos, coriáceas, alternas; vaina tubular, finamente estriada y rugosa, 6-15 x 1.5-2 mm; lámina angostamente lanceolada, ápice truncado, bilobado, margen apical diminutamente crenado a entero; 1.5-5.5 x 0.3-0.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, nutante, florece una sòla vez, 1 cm de largo; pedúnculo corto, terete, delgado, 4-5 mm de largo; provisto en la base de una bráctea, triangular, aguda, 2 mm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 2 mm de largo. **Flores** 7-12, sucesivas, estando 2-6 abiertas de manera simultánea, resupinadas, cuculadas, viendo hacia abajo, color solferino a púrpura intenso, columna negra hacia el ápice, antera negra, callo anaranjado, polinios rojos; sin fragancia. **Ovario** terete, delgado, liso, ligeramente inflado ventralmente en el 1/2 apical, 7 mm de largo. **Sépalos** entreabiertos, libres, anchamente elípticos, ápice redondeado, diminutamente apiculado, margen entero, 5.5-6.5 x 3.5-4.5 mm; el **dorsal** 3-nervado; los **laterales** 4-nervados. **Pétalos** entreabiertos, libres, anchamente elípticos, subredondeados, 3-nervado, margen irregular en la zona media apical, 5-6 x 3-3.5 mm. **Labelo** unido en el 1/2 basal de la columna, entero, cordado, margen ligeramente eroso, en la base forma un mentón al estar doblado hacia abajo y hacia atrás antes del ápice de la columna, 4.5 x 6 mm; ecalloso, el cojín anaranjado formado por una plataforma carnosa, amorfa, estriada, prominente, truncada en el ápice, cóncava en la base; sin quillas. **Columna** arqueada, gruesa, corta,3.4-4 mm de largo. **Clinandrio** corto, entero. **Antera** 4-locular, reniforme, negra. **Polinios** 4, lenticulares, caudículas 2, granulosas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando la 1/2 del ovario, inflado, liso. **Cápsula** no vista.

Terrestrial or rarely epiphytic, branching **herb. Roots** basal, scarce from upper stems, thin. **Stems** branching nearly throughout the length of the main stem, branching again from the upper nodes of the secondary stems, stems terete, thin, straight. **Leaves** 5-8 from the branches, distributed throughout the upper half; sheaths tubular, minutely striated and rugose, blade narrowly lanceolate, apex truncate, bilobed, coriaceous, apical margin minutely crenate to entire. **Inflorescence** apical, racemose, short, nutant, flowering only once, peduncle terete, provided with one bract similar to the floral bracts. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** 7-12, successive, 2-6 open at one time, opening from the base towards the apex of the inflorescence, resupinate, cup-shaped, facing downwards, deep purple, column black towards the apex, anther black, callus orange, pollinia red; without fragrance. **Ovary** terete, thin, smooth, somewhat inflated ventrally along the apical half. **Sepals** partly spreading, free, widely elliptic, apex rounded, minutely apiculate, margin entire; **dorsal** 3-veined, **laterals** 4-veined. **Petals** partly spreading, free, widely elliptic, apex subrounded, 3-veined, margin irregular towards the apical half. **Lip** united to the column along its basal ½ entire, cordate, margin somewhat erose, forming a mentum at the base as it is bent down and backwards before the apex of the column; callus forming a prominent fleshy platform, striated, truncate at the apex, concave at the base, without keels. **Column** arching, thick, short. **Clinandrium hood** short, entire. **Anther** 4-celled, reniform. **Pollinia** 4, lentil-shaped, caudicules 2, granular. **Nectary** penetrating half the ovary, inflated, smooth.

OTHER SPECIMENS: ECUADOR: Cotopaxi: Pilaló, 2400 m, 19 XII 1976, *Boeke 556,* QCA! NY! Latacunga-Quevedo, 3500 m, 26 IV 1979, *Løjtnant 13750,* AAU! Pilaló, 3450-3500 m, 8 IV 1973, *Holm-Nielsen 3299,* AAU! AMES! K! MO! S! SEL! Quevedo to Latacunga, 2400 m, 14 II 1963, *Dodson 2246,* AAU! F! QCA! S! Pilaló, 2500 m, 18 II 1985, *Dodson 15580,* MO! QCA! Latacunga-Quevedo, 3300 m, 27 II 1986, *Embree 60,* (fragments mounted on the upper half of the sheet) MO! Macuchi, 3600 m, 8-13 VI 1983, cult. 23 XI 1983, *Hágsater 7590,* AMO! **Pichincha:** Vicinity of Quito, 2800 m, 9 XII 1939, *Asplund 10084,* S! Aloag, 2800 m, 3 II 1983, *Dodson 13643,* MO! Quito-Sto. Domingo, 3150 m, 10 XI 1984, *Dodson 15439,* QCA! QCNE! MO! Quito-Sto. Domingo, 3150 m, 1 II 1985, *Dodson 15514,* MO! QCNE! Lloa, 2950 m, 16 I 1987, *Dodson 16761,* QCNE! RPSC! San Juan-Chiriboga, 2800-2950 m, 20 III 1979, *Løjtnant 11237,* AAU! GB! QCA! Aloag-Tandapi, 3150 m, 29 V 1979, *Løjtnant 13956,* AAU! Río Soloya, 3050-3100 m, 3 II 1985, *Molau 1111,* GB! QCA! El Pahuma, 2500 m, 15 I 2000, *Suin 495,* QCNE!

OTHER RECORDS: ECUADOR: Cotopaxi: Pilaló, 2400 m, 19 XII 1976, *Boeke 556* SEL, xerox AMO!

DISTRIBUTION AND ECOLOGY: Endemic from central Ecuador on the western slopes of the Andes in the provinces of Cotopaxi and Pichincha south of Quito. Terrestrial or rarely epiphytic, growing at 2400-3600 m altitude. Flowering from November to June.



RECOGNITION: *Epidendrum melanogastropodium* belongs to the Diothonea Group and Gastropodium Subgroup characterized by the small, usually brightly-colored pink to purple flowers on a subsphaerical inflorescence, lip more or less cordiform, united to the basal half of the column. The new species is recognized by the deep cerize-purple flowers with a usually black column and anther, and the orange cushion, the often wide, nearly circular, rounded floral segments, the cushion is an amorphous fleshy structure, without keels on the lip. It closely resembles *E. gastropodium* which has acute floral segments, the lip with a fleshy amorphous cushion ending in three short keels, the column and anther are purple. *Epidendrum eugenii* Schltr. has acute floral segments, the lip without any thickening at the base, has 3, long, parallel keels, the column is purple. *Epidendrum reichenbachianum* Schltr. does not have any cushion nor keels running down the lip, and a short ovary, 5-6.5 mm long. *Epidendrum mesogastropodium* Hágsater & Dodson has pink flowers, a burgundy red to black column, ovate-elliptic, subacute sepals, the cushion of the lip reddish to orange and truncate, not ending in keels; the base of the lip is orange.

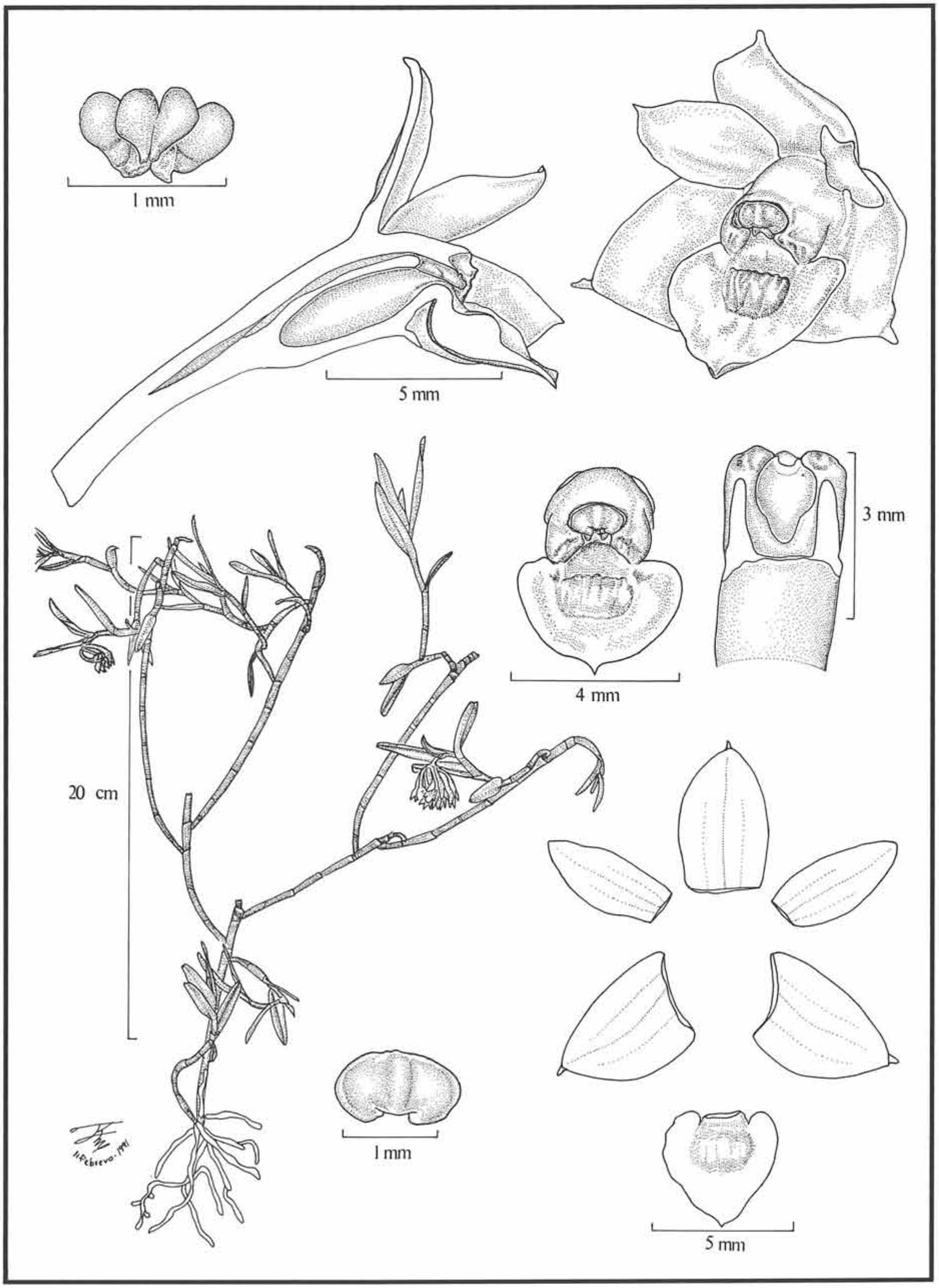
CONSERVATION STATUS: DD. Data deficient. Apparently common in the area where it grows, on disturbed surfaces. It is frequently collected due to the attractive flowers.

ETYMOLOGY: From the Greek, μελας-, black, γαστηρ-, belly, and ποδιον-foot, in reference to the black column with the inflated belly or ovary.

REFERENCES: Dodson, C. H. and P. M. Dodson, 1980. As *Epidendrum gastropodium* Rchb. f., **Icones Plant. Trop.** 4: pl. 379.

Author: E. Santiago **Illustrator: E. Hágsater** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM MESOGASTROPODIUM Hágsater & Dodson

Plate 759

EPIDENDRUM MESOGASTROPODIUM Hágsater et Dodson, *sp. nov.*

ECUADOR: Carchí: El Carmelo a Julio Andrade, El Mirador, 12 km al S de Playón de San Francisco, 4 km de la desviación en el puente, 3360 m, col. 9 July 1990, pressed cult. 13 February 1991, ***Eric Hágsater, Calaway H. Dodson, Daniel Rubio & Nixon Revelo 10823.*** Holotype: AMO! (Illustration voucher).

Epidendro gastropodio Rchb. f. simile sed labelli pulvino truncato rubello vel aurantiaco, labello ad basem aurantiaco, ecarinato, sepalis roseis subacutis, petalis anguste ovatis, columna rubra usque ad nigra discrepans.

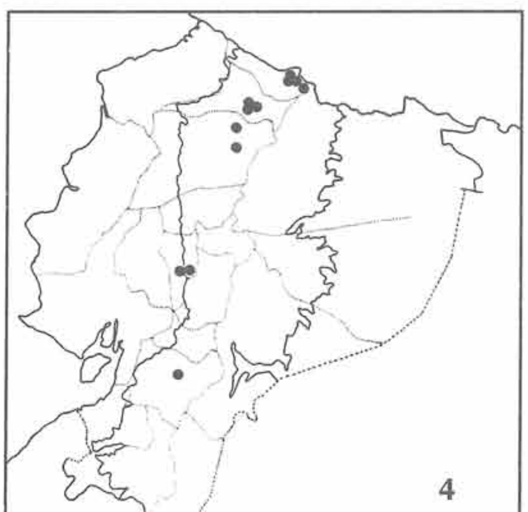
Hierba epífita o terrestre, ramificada, de 26 cm de alto. **Raíces** basales, escasas, delgadas, 1.8 mm de grosor. **Tallos** ramificados cerca del ápice del tallo principal, volviendo a ramificarse de los entrenudos apicales de las ramas sucesivas, tipo caña, teretes, delgados, rectos; el principal 8 x 0.4 cm; las ramificaciones 5.5-11 x 0.25-0.4 cm. **Hojas** del tallo principal no vistas, 5-6 en las ramificaciones, distribuidas en la parte media apical de los tallos, coriáceas, alternas; vaina tubular, finamente estriada y rugosa, 7-15 x 2.5-4 mm; lámina angostamente lanceolada, ápice bilobado, con una quilla dorsal baja, margen apical diminutamente crenado; 2.7-5 x 0.4-0.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, nutante, florece una sola vez, 1 cm de largo; pedúnculo corto, terete, delgado, desprovisto de brácteas, 3 mm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 2 mm de largo. **Flores** 10, sucesivas, estando 6 abiertas de manera simultánea, abriendo de la base hacia el ápice, resupinadas, sépalos y pétalos rosados, columna rojo borgoña a negra, el labelo manchado de naranja en la base, con el cojín rojizo a anaranjado; sin fragancia. **Ovario** terete, delgado, liso, inflado ventralmente en el 1/3 apical, 10-14 mm de largo. **Sépalos** entreabiertos, libres, ovado elípticos, ápice subagudo, diminutamente apiculado, 3-nervados, margen entero, 5.3-5.8 x 2.9-3.4 mm. **Pétalos** entreabiertos, libres, angostamente ovados, subagudos, 3-nervado, margen entero, 4.6 x 2 mm. **Labelo** unido en los 3/4 basales de la columna, entero, cordiforme, en la base formando un mentón al estar doblado hacia abajo y hacia atrás antes del ápice de la columna, margen ligeramente eroso, 4.1 x 3.9 mm; el cojín formado por una plataforma transversal, carnosa, estriada, prominente, truncada en el ápice, cóncava en la base; sin quillas. **Columna** ligeramente arqueada, gruesa, corta, 3 mm de largo. **Clinandrio hood** corto, entero. **Antera** 4-locular, reniforme. **Polinios** 4, obovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando menos de 1/2 del ovario, inflado, liso. **Cápsula** no vista.

Epiphytic or terrestrial, branching **herb. Roots** basal, scarce, thin. **Stems** branching near the apex, cane-like, terete, thin, straight. **Leaves** 5-6 on the branches, distributed throughout the apical half, coriaceous, alternate; sheath tubular, minutely striated and rugose; blade narrowly lanceolate, apex bilobed, with a low dorsal keel, apical margin minutely crenate. **Inflorescence** apical, racemose, short, nutant, flowering only once; peduncle short, terete, thin. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** 10, successive, 6 open at one time, resupinate, sepals and petals pink, column burgundy red to black, lip orange at the base, the cushion reddish to orange; not fragrant. **Ovary** terete, thin, smooth inflated ventrally along the apical 1/3rd. **Sepals** partly spreading, free, ovate-elliptic, apex subacute, minutely apiculate, 3-veined, margin entire. **Petals** partly spreading, free, narrowly ovate, subacute, 3-veined, margin entire. **Lip** united to the basal ¾ of the column, entire, cordiform, cordate at the base, margin slightly erose, forming a mentum at the base as it is bent down and back before the apex of the column; cushion formed by a transverse, fleshy, striated platform, truncate at the apex, concave at the base, without keels. **Column** slightly arching, thick, short. **Clinandrium hood** short, entire. **Anther** 4-celled, reniform. **Pollinia** 4, obovoid. **Rostellum** apical, slit. **Nectary** penetrating less than 1/2 of the ovary, inflated, smooth.

OTHER SPECIMENS: ECUADOR: Azuay: Molleturo to Cuenca, 2800-2900 m, 7 III 1985, *Harling 22865,* GB! QCA! **Bolivar:** Atio de Telimbela, 2800 m, 24 I 1944, *Acosta 7159,* F! Santa Fé to Catarama, 3150 m, 2 IX 1983, *Brandbyge* 42456, AAU! Guaranda-San Pablo Chillanes, 2300 m, 17 II 1991, *Dodson 18696,* MO! QCNE! Santa Fé to Pueblo Viejo, 3200 m, 14 II 1985, *Molau 1274,* MO! QCA! **Carchí:** Tulcán-Maldonado, 3160 m, 29 IV 1993, *Hágsater 11259,* AMO! El Carmelo-Tulcán, 3150-3300 m, 15 IV 1979, *Løjtnant 12549,* AAU! El Carmelo, 3150-3350 m, 16 IV 1979, ibid. *12609,* AAU! **Imbabura:** Azabí, 2800 m, 28 XI 1949, *Acosta 14714,* F! Cotacachí to Apuela, 3400 m, 22 X 1983, *Balslev 4444,* AAU! QCA! Cuicocha-Selva Alegre, 3220 m, 6 XII 1986, *Hágsater 8943,* AMO! Ibid. 3050 m, *Hágsater 8946,* AMO! MO! Laguna de Cuicocha, 3100-3300 m, 11 X 1991, *Peñafiel 473,* MO! QCNE! Cotacachí to Apuela, 3000 m, 11 VIII 1990, *Rubio 550,* MO! Mojanda, 2900-3150 m, 13 XII 1966, *Sparre 13549,* S! **Pichincha:** Reserva Geobotánica Pululahua, 3100 m, 12 XI 1989, *Cerón 7689,* MO! QCNE! San José de Minas-Playas Blancas, 26 IV 1980, *Jaramillo 2366a,* QCA! QCNE! Reserva Geobotánica Pululahua, 2800 m, 3 IX 1994, *Nuñez 20,* MO! QCNE! SEL! **Sucumbios:** Playon de San Francisco-Julio Andrade, 3200-3400 m, 11 VII 1991, *Dodson 18783,* MO! QCNE! Playón de San Francisco to El Carmelo, 3000 m, 14 IV 1979, *Løjtnant 12528,* AAU! GB!

DISTRIBUTION AND ECOLOGY: Known only from the Andes of Ecuador from the border between Ecuador and Colombia south along the western range to north of Quito and occasionally in the provinces of Bolivar and Azuay. Epiphytic and terrestrial, at 2300-3400 m altitude. Flowering in August to April.

RECOGNITION: *Epidendrum mesogastropodium* belongs to the Diothonea Group, Gastropodium Subgroup, characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally to obliquely to free, the subgroup has small, usually brightly-colored flowers, the column ending in fleshy-thickened lobes. The species has pink flowers, burgundy red to black column, ovate-elliptic, subacute sepals, and the cushion of the lip truncate, not ending in keels; the base of the lip is orange. It is similar to *Epidendrum melanogastropodium* Hágsater & Dodson, though that species usually has a black column and anther, and nearly circular, wide, rounded tepals; the cushion is also truncate, but closer to the base of the lip. *Epidendrum gastropodium* is similar overall, but the cushion of the lip is prolonged into three short keels.



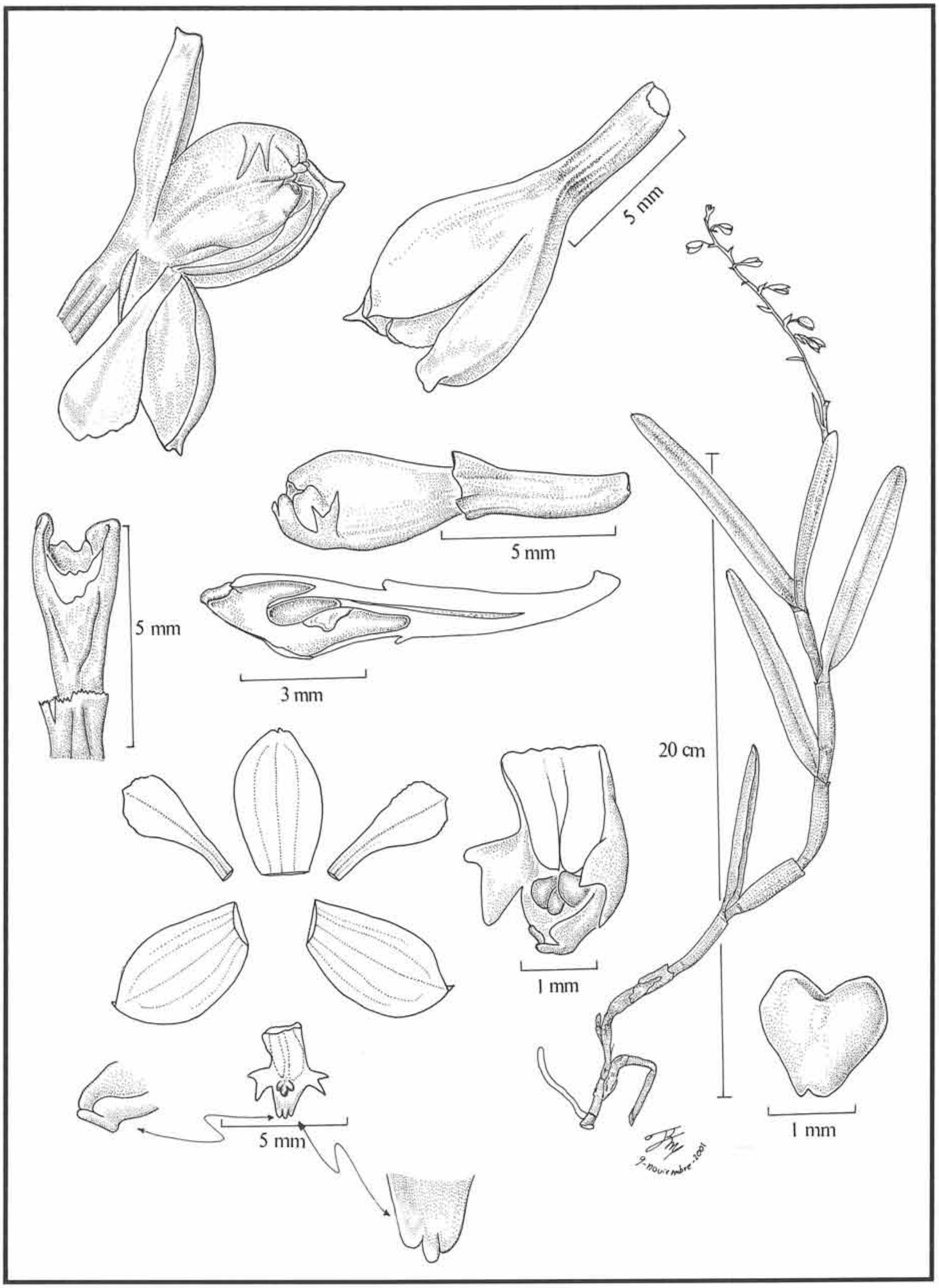
CONSERVATION STATUS: DD. Data deficient.

NOTE: This species is curious, it is common north of Quito, in Cotopaxi it is substituted by *E. melanogastropodium*, and then scarce further south, where we have only identified a few specimens in Bolivar and Azuay. *Epidendrum gastropodium* is found from the border with Colombia north along the western slopes of the Cordillera Central in Nariño, Cauca and Valle del Cauca and Ecuador north in of Sucumbios and rarely in Imbabura.

ETYMOLOGY: From the Greek, μεσος- middle, in the middle, γαστηρ- belly, and ποδιον- foot, in reference to the fact that this species is intermediate between *E. melanogastropodium* and *E. gastropodium,* and shares the inflated belly or ovary. The generic name *Gastropodium* was originally coined for the closely related species.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM MICROGLOSSOIDES Hágsater & Dodson

Plate 760

EPIDENDRUM MICROGLOSSOIDES Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Carchi: Valle de Maldonado, km 60 on road Tulcán-Maldonado, cleared slopes along the road and denser cloud forest, 0°51'N 78°04'W, 2700 m, 18 May 1973, ***L. Holm-Nielsen, S. Jeppesen, B. Løjtnant & B. Øllgaard 5687.*** Holotype: AAU! (Illustration voucher).

Epidendro microglosso Schltr. simile sed rhachide recta, petalis ad marginem dentatis 1-nervatis, labello tricalloso, callis parvis subglobosis, labelli lobulis lateralibus bilobatis, lobis triangularibus acutis, lobulo medio subquadrato ad apicem trilobato, lobulis integris rotundatis, lobulo medio lateralibus longiore differens.

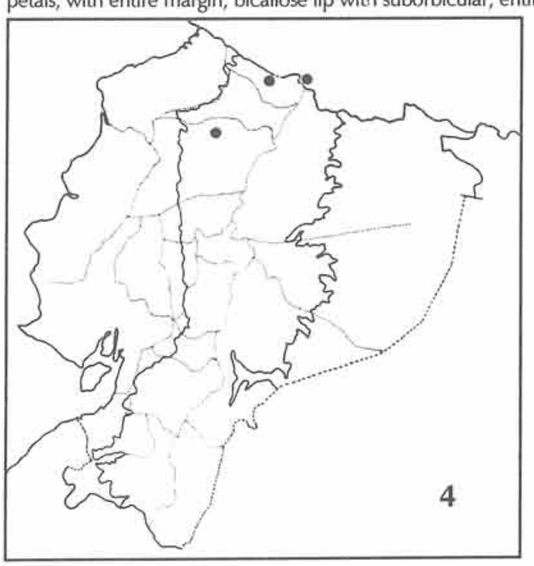
Hierba rastrera, simpodial, epífita o litófita de 32 cm de alto. **Raíces** de la base de cada tallo, gruesas, carnosas, 2-3 mm de grosor. **Tallos** producidos de los nudos inferiores del tallo anterior, a 1.0-1.5 cm arriba de la base; erectos, rectos, teretes, 18 x 0.3-0.5 cm. **Hojas** 4, distribuidas a lo largo de los 2/3 superiores del tallo, cubierto en la base por 1-2 vainas no foliosas, escariosas, iguales a las foliares, estriadas y finamente rugosas en seco, 15-23 mm de largo; lámina lanceolado oblonga, ápice obtuso, aristado, margen entero, 5.0-8.5 x 0.8-1.0 cm. **Bráctea espatácea** 1, ancipitosa, oblonga, aguda, 6.0 x 1.0 cm. **Inflorescencia** apical, racemosa, erecta, algo laxiflora, 15 cm de largo, raquis recto; el pedúnculo erecto, 6 cm de largo, cubierto totalmente con la espata, el raquis erecto, 9 cm de largo. **Flores** 11, simultáneas, no resupinadas, sépalos y pétalos color chocolate, el dorso teñido de púrpura café, labelo y columna blancos, fragancia delicada. **Brácteas florales** semejantes al largo del ovario, triangulares, agudas, 3-5 mm de largo, reduciéndose en tamaño hacia el ápice de la inflorescencia. **Ovario** corto, no inflado, terete, 4-5 mm de largo. **Sépalos** entreabiertos, ovados, obtusos, 3-nervado, 6.0-6.7 x 3.0-3.8 mm, los **laterales** ligeramente oblicuos, con una quilla dorsal apical, 5-nervados, margen entero. **Pétalos** entreabiertos, espatulados, obtusos, 3-nervados, las venas laterales cortas, la central prolongandose hasta el ápice, margen dentado, 5.0-5.5 x 2.0-2.5 mm. **Labelo** unido a la columna, reducido, trilobado, base truncada, 0.8-0.9 x 3.0-3.5 mm; tricalloso, los callos pequeños, subglobosos; lóbulos laterales bilobados, los lóbulos triangulares, agudos, los lóbulos basales más cortos que los apicales, margen entero; lóbulo medio subcuadrado, ápice trilobado, los lóbulos redondeados, enteros, medio más largo que los laterales. **Columna** corta, gruesa, dilatada hacia el ápice, oblicuamente trunca, 4.0-4.5 mm de largo. **Clinandrio** reducido dorsalmente, extendido lateralmente por dos alas agudas. **Antera** 4-locular, cordiforme. **Polinios** no vistos. **Lóbulos laterales del estigma** cerca de la mitad de largo de la cavidad estigmática. **Nectario** grueso, inflado, agudo, sin penetrar al ovario, no ornamentado. **Cápsula** no vista.

Sympodial, repent, epiphytic or lithophytic **herb. Roots** basal, thick, fleshy. **Stem** produced from the lower internodes, erect, straight, terete. **Leaves** 4, distributed throughout the upper 2/3 of the stem, sheaths minutely striated and rugose when dry; blade oblong-lanceolate, obtuse, aristate, margin entire. **Spathaceous bract** 1, ancipitose, oblong, acute. **Inflorescence** apical, racemose, erect, somewhat lax-flowered, peduncle completely covered by the spathaceous bract. **Flowers** 11, simultaneous, non-resupinate, sepals and petals chocolate brown, column and lip white, weakly fragrant. **Floral bracts** about as long as the ovary, triangular, acute. **Ovary** short, terete. **Sepals** partly spreading, ovate, obtuse, 3-veined, the laterals somewhat oblique, with a dorsal apical keel, 5-veined. **Petals** partly spreading, spathulate, obtuse, margin dentate, 3-veined. **Lip** united to the column, reduced, 3-lobed, base truncate, 3-callose, calli small, subglobose, lateral lobes bilobed, the lobes triangular, acute, margin entire; midlobe subquadrate, apex 3-lobed, the lobes rounded, the middle lobe slightly longer than the laterals. **Column** short, thick, dilated towards the apex and obliquely truncate. **Clinandrium hood** dorsally reduced, extended laterally into two, acute wings. **Anther** 4-celled, cordiform. **Nectary** thick, inflated, acute, not penetrating the ovary.

OTHER SPECIMENS: COLOMBIA: Nariño: Ipiales, Volcan de Chiles, 2590 m, *Ewan 16086*, AMES! **ECUADOR: Carchi:** 13 km SE of Maldonado, 2600 m, 1 III 1974, *Harling 12378*, AMES! (illust., AMO!) GB! **Pichincha:** Monte Pichincha, 8000 ft [2448 m], *Jameson 617*, E! Reserva Orquideológica El Pahuma, carretera Calacalí-Los Bancos, km 22, 2400 m, 7 XI 1999, *Suin 431*, QCNE!

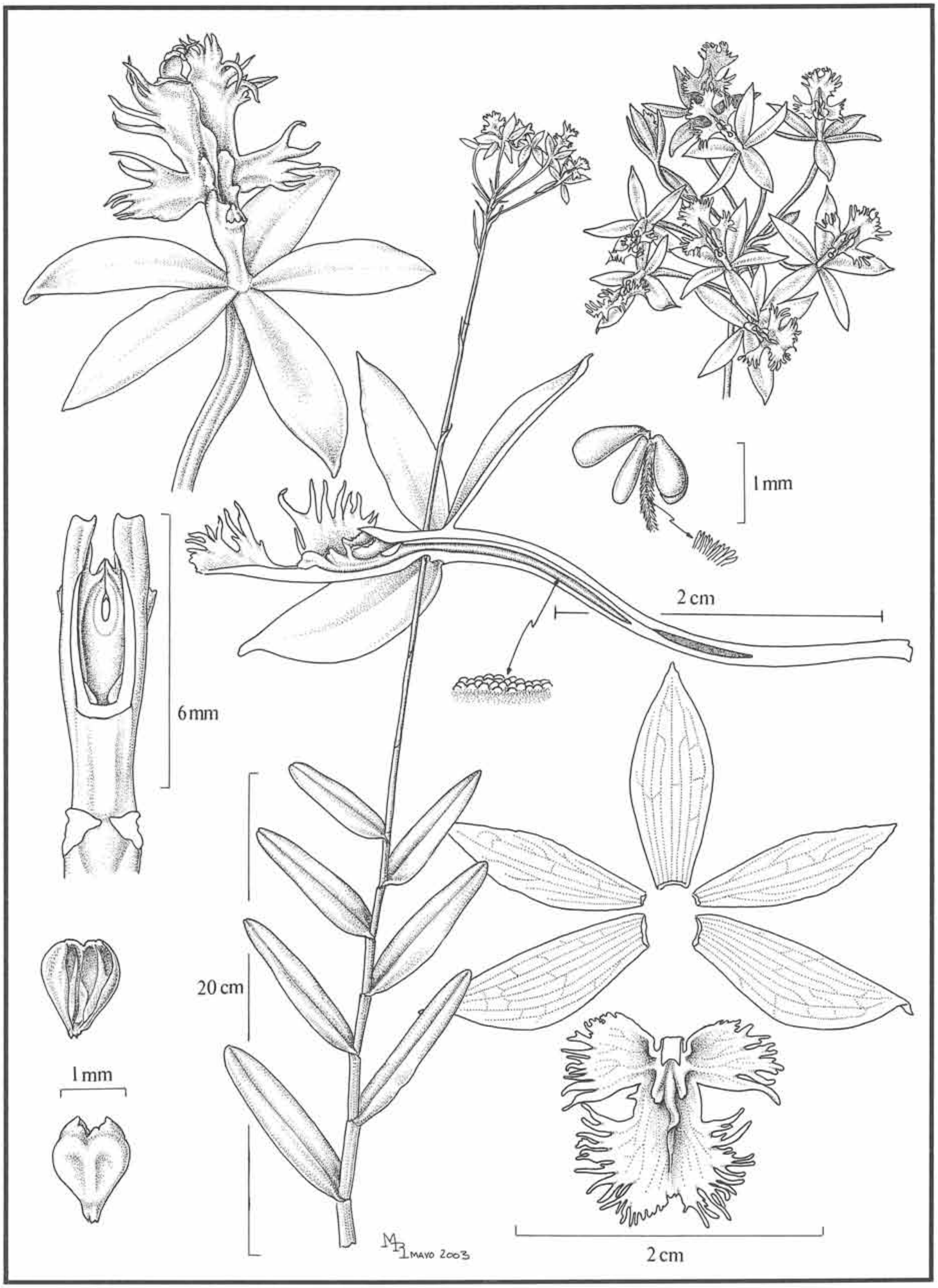
DISTRIBUTION AND ECOLOGY: Known from northwestern Ecuador and neighboring Colombia. Epiphytic and on road-banks, 2000-2700 m altitude. Flowering in March to November.

RECOGNITION: *Epidendrum microglossoides* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species has terete stems, 4, narrow leaves distributed throughout the stems, spathulate petals, a tricallose lip, the calli small, subglobose, lateral lobes of the lip bilobed, the lobes triangular, acute; midlobe of the lip subquadrate with a 3-lobed apex, the middle one longer than the laterals, entire, rounded. It is similar to *Epidendrum microglossum* which has laterally compressed stems, a flexuose rachis, 3-veined petals, with entire margin, bicallose lip with suborbicular, entire lobes. *Epidendrum brachyglossum* Lindl. has linear petals, and a bicallose lip with subglobose, entire lateral lobes and transversally subquadrate, entire midlobe. *Epidendrum condorense* Hágsater & Dodson has laterally compressed stems, two, 1-2 cm wide leaves, a many-flowered, dense, inflorescence, 3-veined, oblanceolate-oblong petals, three prominent calli, and a lip with lateral lobes obliquely subquadrate, the apex bilobed, the interior lobe acute the outer lobe irregular-rounded, midlobe subquadrate, and a subsphaerical anther.



CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: From the Greek, μικρος- small, γλωσσα- tongue, and the ending οιδες- resembling, in reference to the resemblance between this species and the small-lipped *E. microglossum*.



EPIDENDRUM MIMOPSIS Hágsater & Dodson Plate 761

EPIDENDRUM MIMOPSIS Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Zamora-Chinchipe: Zumba, 1000 m, epiphyte, pressed 10 March 2003, Hort. Ecuagenera, collected by Hugo Medina Troyani, ***E. Hágsater 13872.*** Holotype: AMO (Illustration voucher).

Epidendro mimetico Carnevali & G. Romero simile sed floribus minoribus purpureis, callis carinaque lutea, labelli lobulo medio latiore et prominenti, floribus in unico plano horizontali dispositis sed labello extrorsus obverso abhorrens.

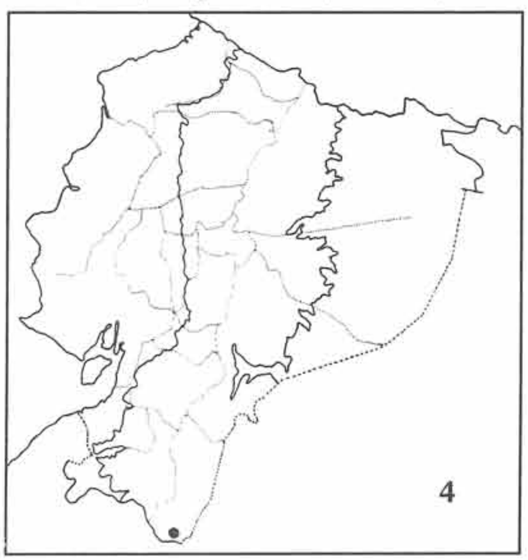
Hierba epífita, cespitosa, erecta, de 60 cm de alto o más. **Raíces** basales, distribuidas a lo largo de unos 10 cm basales del tallo, carnosas, delgadas. **Tallos** sencillos, tipo caña, teretes, delgados, rectos, de más de 40 x 0.4 cm. **Hojas** 7 ó más , alternas, distribuidas a lo largo de los 2/3 apicales del tallo; vaina tubular, finamente estriada, algunas teñidas incipientemente de púrpura, 2.0-2.8 x 0.3-0.4 cm; lámina coriácea, lisa, oblongo lanceolada, ápice redondeado, levemente bilobado, margen entero, 5.5-8.0 x 1.1-1.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, elongada, 32 cm de largo; pedúnculo alargado, terete, delgado, 27 cm de largo, cubierto casi en su totalidad por 6 vainas tubulares, agudas, finamente estriadas, 3.3-5.5 x 0.2-0.25 cm de largo; raquis abreviado, terete, 2.7 cm de largo. **Flores** 16, sucesivas, unas 8 abiertas de manera simultánea, resupinadas, todas en un plano horizontal, formando una umbella, color morado, callo y quilla amarillos; sin fragancia. **Brácteas florales** mucho más cortas que el ovario, triangular lanceoladas, acuminadas, 4-12 [19] mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 23-30 mm de largo. **Sépalos** extendidos, libres, elípticos, agudos, con una quilla dorsal diminuta, 6-nervados, margen extendido y entero, 14-15 x 4.6-4.7 mm; los **laterales** oblicuos. **Pétalos** extendidos, libres, angostamente elípticos, agudos, 3-nervados, las nervaduras laterales muy ramificadas dando la apariencia de ser 5 ó 6 nervados; margen extendido, la mitad apical algo eroso, 14 x 3.3 mm. **Labelo** unido a la columna, trilobado, base cordada, margen profundamente fimbriado, 12.5 x 12 mm; bicalloso, los callos delgados, alargados cerca de la parte media del istmo, disco provisto de una quilla intercallosa prominente, flexuosa en el ápice, desvaneciendose antes de llegar a seno apical; lóbulos laterales oblicuamente rectangulares, 5 x 4.5 mm; lóbulo medio flabelado, ápice ligeramente emarginado, 8 x 9 mm. **Columna** corta, recta, delgada, obcónica en el ápice, ápice diminutamente bidentado, 6.7 mm de largo. **Clinandrio** reducido, aserrado a los lados. **Antera** ovada, con un diminuto mucrón, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas más largas que los polinios, formadas por tétradas en forma de tejas apiladas. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de 1/3 del largo de la cavidad estigmática. **Nectario** penetrando cerca de la mitad del ovario, finamente papiloso. **Cápsula** no vista.

Epiphytic, caespitose, erect, **herb. Roots** distributed along the base of the stem, fleshy, thin. **Stems** simple, cane-like, terete, thin, straight. **Leaves** numerous, distributed throughout the apical 2/3 of the stems, sheath tubular, minutely striated; blade coriaceous, smooth, oblong-lanceolate, apex rounded, slightly bilobed, margin entire. **Inflorescence** apical, racemose, elongate; peduncle elongate, terete, thin, covered nearly totally by acute, tubular, sheaths; rachis abbreviated, terete. **Flowers** 16, successive, about 8 open at one time, resupinate, all in one horizontal plane, producing an umbell, purple, calli and keel yellow, without fragrance. **Floral bracts** much shorter than the ovary, triangular, lanceolate, acuminate. **Ovary** terete, thin, smooth. **Sepals** spreading, free, elliptic, acute, with a minute dorsal keel, 6-veined, margin spreading and entire, the laterals oblique. **Petals** spreading, free, narrowly elliptic, acute, 3-veined, the lateral veins much branched so as to appear 5 or 6 veined; margin spreading, the apical half slightly erose. **Lip** united to the column, 3-lobed, base cordate, margin deeply fimbriate; bicallose, the calli thin, elongate, reaching the middle of the isthmus, with an prominent intermediate keel, flexuous, nearly reaching the apical sinus; lateral lobes obliquely rectangular, midlobe flabellate, apex slightly emarginate. **Column** short, straight, thin, the apex minutely bidentate. **Clinandrium hood** reduced, the sides somewhat serrate. **Anther** ovate, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles longer than the pollinia, formed by tetrads which appear as stacked roof-tiles. **Rostellum** subapical, slit. **Nectary** penetrating about half the ovary, minutely papillose.

OTHER SPECIMENS: None seen.

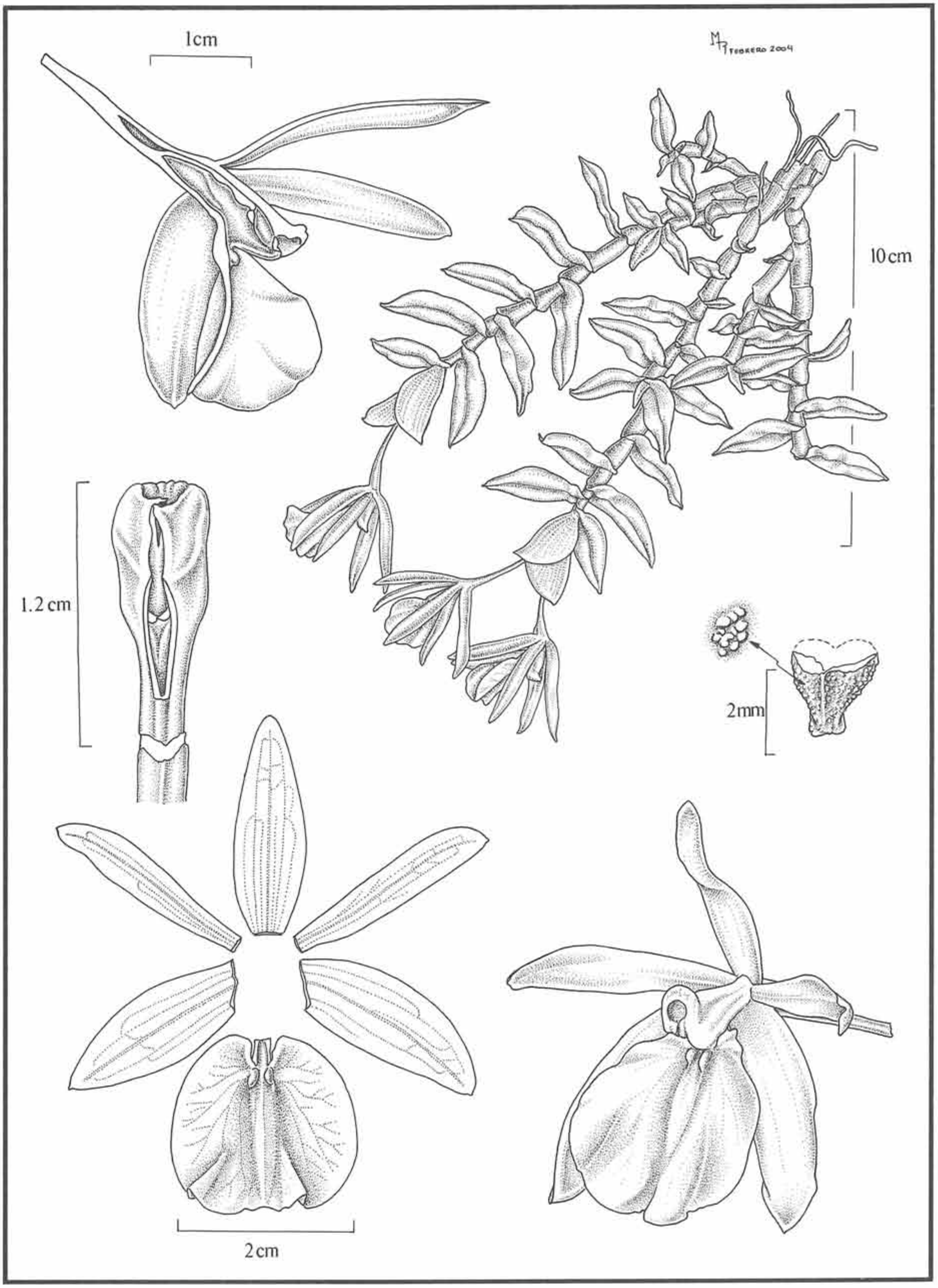
DISTRIBUTION AND ECOLOGY: Known only from the type locality: Zumba, on the eastern slopes of the Andes in southeastern Ecuador, at 1000 m altitude. Flowering in March, probably over several months of the year.

RECOGNITION: *Epidendrum mimopsis* belongs to the Calanthum Subgroup of the Secundum Group which is characterized by the caespitose habit, simple, terete, stems, numerous, oblong-elliptic, bilobed leaves, mostly elongate inflorescence, with a raceme of successive flowers, the lip with two calli and a prominent, flexuous keel. The species is recognized by the flowers being presented in one plane, as in an umbell, the lip mostly facing outwards, purple-colored with yellow calli and keel, the lip deeply fimbriate with the midlobe flabellate, barely emarginate. It closely resembles *Epidendrum mimeticum* which has slightly larger, variously colored flowers, also in one plane, but the lip facing inwards, with narrower petals and midlobe of the lip. *Epidendrum thermophilum* Hágsater & Dodson, from the very hot, dry valley below Ibarra, Imbabura, on the western slopes of the Andes in north-western Ecuador has similar flowers and flower color, but these are smaller, upright, non-resupinate, and larger plants. *Epidendrum macrocarpum* L. C. Rich. is epiphytic, associated with ants, and has larger, orange flowers.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek μιμος- mimic, mime, like an actor, deceiving, and οφις- aspect, appearance, hence resemblance, in reference to the similarity between this species and *E. mimeticum*.



EPIDENDRUM MOLLETURENSE Hágsater & Dodson

Plate 762

EPIDENDRUM MOLLETURENSE Hágsater *et* Dodson, sp. nov.

Type: ECUADOR: Azuay: Parroquia Molleturo; El Sural; bosque muy intervenido, nublado, presencia de musgos y epífitas, suelo pedregoso; 2650 m, 2 March 1991, ***Armando Castellanos 297.*** Holotype: QCNE 81546! (Illustration voucher).

Epidendro tigriphyllo Hágsater simile sed petalis latioribus, labello suborbiculari-obovato, versus apicem leviter latiore, ad basem profunde angusteque cordato, ad apicem recto, bicalloso, callis parvis divergens.

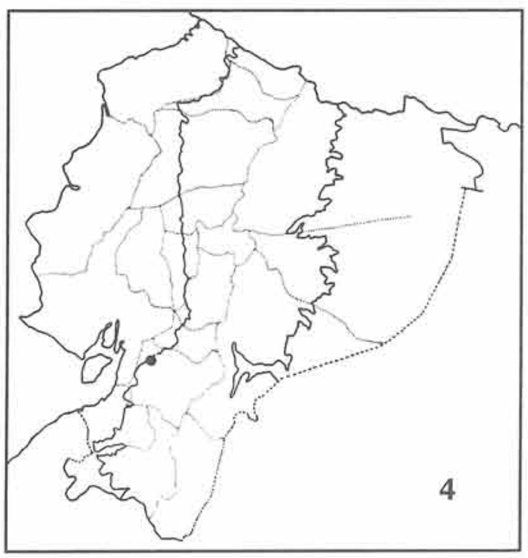
Hierba epífita, colgante, cespitosa, ramificada basalmente, hasta de 15 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, delgadas, de 1 mm de grosor. **Tallos** sencillos, tipo caña, producidos cerca de la base de los tallos anteriores, teretes, algo flexuosos, 8.5-9 x 0.2-0.43 cm. **Hojas** 11, distribuidas a todo lo largo del tallo, dísticas, la basal más pequeña; vainas infundibuliformes en seco, lateralmente comprimidas, finamente estriadas, 5-9 x 2.5-5 mm; lámina angostamente lanceolada, oblicua, ápice agudo, margen diminutamente dentado, coriácea, 1.3-2.5 x 0.4-0.9 cm. **Brácteas espatáceas** 2, elíptico ovadas, conduplicadas, obtusas, margen entero, cubriendo totalmente el pedúnculo, 17 x 10 mm. **Inflorescencia** apical, corta, recta, pauciflora, 5.5 cm de largo (incluyendo las flores). **Brácteas florales** no vistas, ocultas dentro de las brácteas espatáceas. **Flores** 2, simultáneas, resupinadas, pétalos "crema rojos, corola roja con punta amarilla"; sin datos de fragancia. **Ovario** terete, delgado, liso no inflado, 15-20 mm de largo. **Sépalos** entreabiertos, libres, ápice subredondeado, 5-nervados, margen entero, extendido, 23-25 x 8-9 mm; el **dorsal** angostamente ovado; los **laterales** angostamente elípticos, oblicuos. **Pétalos** entreabiertos, libres, oblongos, ligeramente ensanchados en el ápice, ligeramente oblicuos, ápice redondeado, 3-nervados, margen entero, 23-25 x 4-6 mm. **Labelo** oblicuamente unido a la columna, entero, suborbicular obovado, ligeramente más ancho hacia el ápice, profunda y angostamente cordado en la base, ápice más o menos recto, margen entero, 20 x 21 mm; bicallosos, los callos pequeños, redondeados. **Columna** gruesa, dilatada hacia la mitad, recta con el ápice engrosado, provista ventralmente de un par de alas rectas, prominentes, que se ensanchan gradualmente de la base hacia el ápice, 12 mm de largo. **Clinandrio** corto, fuertemente engrosado, margen entero. **Antera** obovada, diminutamente papilosa. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, ocupando 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, amplio, apenas penetrando el ovario, no inflado, liso. **Cápsula** no vista.

Epiphytic, pendent, caespitose **herb,** branching basally. **Roots** basal, fleshy, thin. **Stem** simple, cane-like, produced near the base of the previous stem, terete, somewhat flexuous. **Leaves** 11, distributed throughout the stems, distichous, the basal leaf smaller; sheaths infundibuliform when dry, laterally compressed, minutely striated; blade narrowly lanceolate, oblique, apex acute, coriaceous, apical margin minutely dentate. **Spathaceous bracts** 2, elliptic-ovate, obtuse, conduplicate, margin entire, covering the whole peduncle. **Inflorescence** apical, short, erect, few-flowered. **Flowers** 2, simultaneous, resupinate, "petals cream-red, corolla red with yellow point". **Ovary** terete, thin, smooth. **Sepals** partly spreading, free, apex subrotund, 5-veined, margin entire; the **dorsal** narrowly ovate; the **laterals** narrowly elliptic, oblique. **Petals** partly spreading, free, oblong, slightly widened towards the apex, apex rounded, 3-veined, margin entire, slightly oblique. **Lip** united obliquely to the column, entire, suborbicular-obovate, slightly wider towards the apex, base deep and narrowly cordate, apex roughly straight, margin entire; bicallose, the calli small, rounded. **Column** thick, dilated towards the middle, straight with the clinandrium thickened; provided ventrally with a pair of straight, prominent wings which are thickened from the base towards the apex. **Clinandrium hood** short, prominently thickened, margin entire. **Anther** obovoid, minutely papilose. **Rostellum** apical, slit. **Nectary** shallow, wide, slightly penetrating the ovary, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the Pacific slope of the Andes in south central Ecuador, in wet cloud forest at 2650 m altitude. Flowering in March.

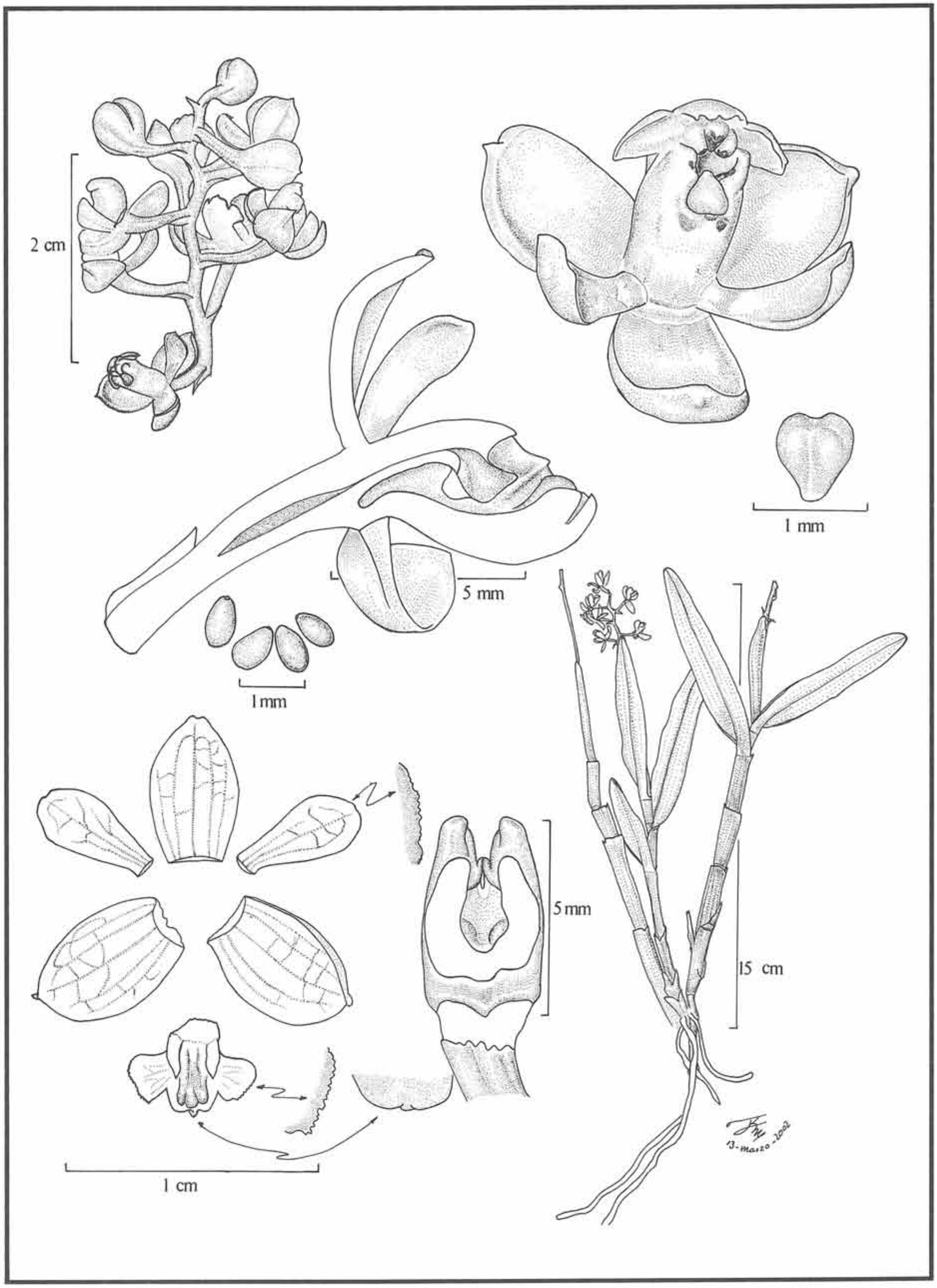
RECOGNITION: *Epidendrum molleturense* belongs to the Megalospathum Group characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semiovate spathaceous bracts, resupinate flowers, the column obliquely united to the lip, occasionally free. The species is recognized by the large, flowers, the relatively wide petals (23-25 x 4-6 mm), the suborbicular-obovate lip deep and narrowly cordate at the base, the apex roughly straight, with two small rounded calli at the base, and the clinandrium hood of the column prominently thickened. *Epidendrum tigriphyllum* from Antioquia, Colombia has narrower petals, the apex of the ovary swollen behind the lateral sepals, and the lip spade-like, truncate at the base, obtuse-rounded at the apex, with a single, 4-lobed callus at the base, one pair of lobes superimposed on the other. *Epidendrum portillae* Hágsater & Dodson has larger flowers, the sepals 25-28 mm long, 3.5 mm wide petals, the lip somewhat cordate, subovate, the margins undulate when flattened, with two thick, laminar keels, and the slightly arching column with a prominent, entire, fleshy clinandrium.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the Parroquia de Molleturo, in the Province of Azuay, where the type was collected.

Authors: E. Hágsater & C. H. Dodson Illustrator: M. López R. Editors: E. Hágsater & L. Sánchez S.
Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM MONTISILLINICENSE Hágsater & Dodson

Plate 763

EPIDENDRUM MONTISILLINICENSE Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Pichincha: W side of Mt. Illiniza, 3000 m, 21 January 1987, ***Alex Hirtz 3072.***
Holotype: RPSC! (Illustration voucher, color photo). Isotype: MO!

Epidendro boylei Hágsater & Dodson simile sed caulibus majoribus, inflorescentiis majoribus 8-15-floralibus, sepalis petalisque brunneo-rubellis raro albo-viridulis, ad apicem et basem viridibus, labello albo maculis rubris in callis, columna alba ad apicem maculis rubris, labelli lobulis lateralibus et medio subquadrato, anthera deltoidea discrepans.

Hierba epífita, simpodial, cespitosa, erecta, 14-22 cm de alto. **Raíces** basales, carnosas, delgadas, 0.7-1.2 mm de grosor. **Tallos** producidos de los nudos inferiores del tallo anterior, a 1-5.5 cm arriba de la base, 1-2 por tallo, tipo caña, rectos, ancipitosos, 7.0-14.0 x 0.2-0.4 cm. **Hojas** 3-5 distribuidas a lo largo de la mitad apical del tallo, erectas; vaina tubular, ancipitosa, estriada, 1.5-2.5 x 0.5-0.6 cm; lámina angostamente elíptica a lanceolada, desigualmente bilobada, con una quilla dorsal, 3.5-9 x 1.0-1.5 cm. **Bráctea espatácea** 1, tubular, oblonga, ancipitosa, subaguda, 3.0-4.0 x 0.4-0.6 cm. **Inflorescencia** apical, racemosa, erecta, 7.0-9.0 cm de largo; pedúnculo corto, terete a lateralmente aplanado, recto, no ornamentado, cubierto de 3/4 a su totalidad por la espata. **Brácteas florales** desde de la mitad de la longitud del ovario (las basales), hasta obsoletas, triangulares, agudas, 1.3-3.4 mm de largo. **Ovario** terete, no ornamentado, ligeramente dilatado hacia el ápice, 5.4-7.0 x 0.5-0.7 mm. **Flores** 8-15, sucesivas, no resupinadas, sépalos y pétalos blanco verdosos, en ocasiones púrpura con la base y el ápice verde, labelo blanco con manchas rojas en los callos, columna blanca con manchitas rojas en el ápice; fragancia no registrada. **Sépalos** extendidos, ligeramente cóncavos, libres, elípticos, agudos, 5-nervados, margen entero, 6.0-6.5 x 3.0-3.8 mm; el **dorsal** obtuso; los **laterales** ligeramente oblicuos y con una carina apical. **Pétalos** entre abiertos, ligeramente cóncavos, libres, espatulados, obtusos, 3-nervados, margen entero, 5.2-5.5 x 2.0-2.3 mm. **Labelo** unido a la columna hasta la base del lóbulo medio, reducido, trilobado, carnoso, 4.0-4.2 x 4.3-5.0 mm; bicalloso, los callos alargados; lóbulos laterales subcuadrados, margen apical dentado; lóbulo medio subcuadrado, apiculado. **Columna** recta, 3.6-4.2 mm de largo. **Clinandrio** corto, entero. **Antera** deltoide, 4 locular. **Polinios** 4, elípticos, lateralmente comprimidos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de 1/2 de largo de la cavidad estigmática. **Nectario** ligeramente sobrepasando el perianto, no ornamentado. **Cápsula** no vista.

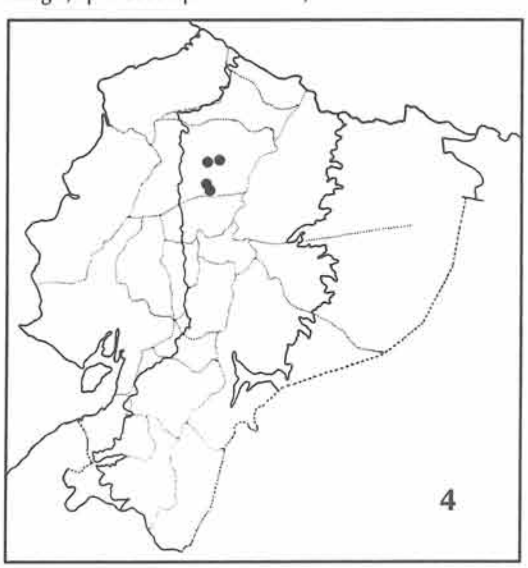
Epiphytic, sympodial, erect, **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, straight, ancipitose. **Leaves** 3-5, distributed throughout the apical half of the stem; sheaths tubular, ancipitose, striated; blade narrowly elliptic to lanceolate, unequally bilobed, with a dorsal keel. **Spathaceous bract** 1, tubular, oblong, ancipitose, subacute. **Inflorescence** apical, racemose, erect; peduncle short, terete to laterally compressed, straight, covered from ¾ to its entire length by the spathaceous bract. **Floral bracts** from half the length of the ovary to obsolete, triangular, acute. **Ovary** terete, slightly dilated towards the apex. **Flowers** 8-15, successive, non-resupinate, sepals and petals purple, rarely greenish-white with the base and apex green, lip white, with red spots on the calli, column white with small red spots at the apex. **Sepals** spreading, slightly concave, free, elliptic, acute, margin entire, 5-veined; the dorsal obtuse, laterals slightly oblique, with an apical keel. **Petals** partly spreading, slightly concave, free, spathulate, obtuse, margin entire, 3-veined. **Lip** united to the column until the base of the midlobe, reduced, 3-lobed, fleshy; 2-callose, calli elongate; lateral lobes subquadrate, apical margin dentate; midlobe subquadrate, apiculate. **Column** straight. **Clinandrium hood** short, entire. **Anther** deltoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Rostelum** subapical, slit. **Nectary** slightly penetrating the ovary, unornamented.

OTHER SPECIMENS: ECUADOR: Pichincha: New road, Quito-Santo Domingo, km 18-25, 03 VI 1976, *Brenner 69*, SEL! Km 29 on road from Quito to Santo Domingo de los Colorados, 2900 m, 22 X 1961, *Dodson 1036*, QCA! SEL! On the road cut near the pass, km 18-25, between Quito and Chiriboga, ca. 3000 m, 18 II 1978, *Luer 2616*, SEL! Quito-Santo Domingo Road, 75 km south of Quito, 11 km south from jct. of road to Latacunga, 10,500 fr.,4 VIII 1980, *Sauleda 3839*, AMES! FLAS! MO! NY! Quito, Protector Maquipucuna, upper slopes of Cerro Monte Cristi, c. 9 km airline SE of Nanegalito, 2600 m, 8-9 IX 1993, *Webster 30571*, QCNE!

OTHER RECORDS: ECUADOR: Pichincha: W side of Mt. Illiniza, 3000 m, 21 I 1987, *Hirtz 3072*. (Photo AMO!).

DISTRIBUCION AND ECOLOGY: Known only from Ecuador. Epiphyte, 2800-3000 m. Flowering from June to February.

RECOGNITION: This species belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species has small plants, 14-22 cm tall, lateral compressed stems, small inflorescence, 7-9 cm long, flowers with sepals and petals purple, rarely greenish-white with base and apex green, lip white with red speck at the calli, column white with small red specks, petals spathulate with an entire margin, lip with subquadrate lobes, the laterals with a dentate apical margin, anther deltoid. *Epidendrum boylei* has shorter plants, 8-10 cm tall, smaller inflorescence, 6 cm long, with 4 flowers, sepals and petals brown and a creamy white lip, lateral lobes of the lip subrhombic, rounded, midlobe semicircular, apiculate. *Epidendrum brachyglossum* Lindl. has a longer inflorescence, 12-20 cm long, sepals and petals greenish yellow with white lip, petals linear, lip suborbicular lateral lobes, entire, rectangular midlobe and reniform anther.

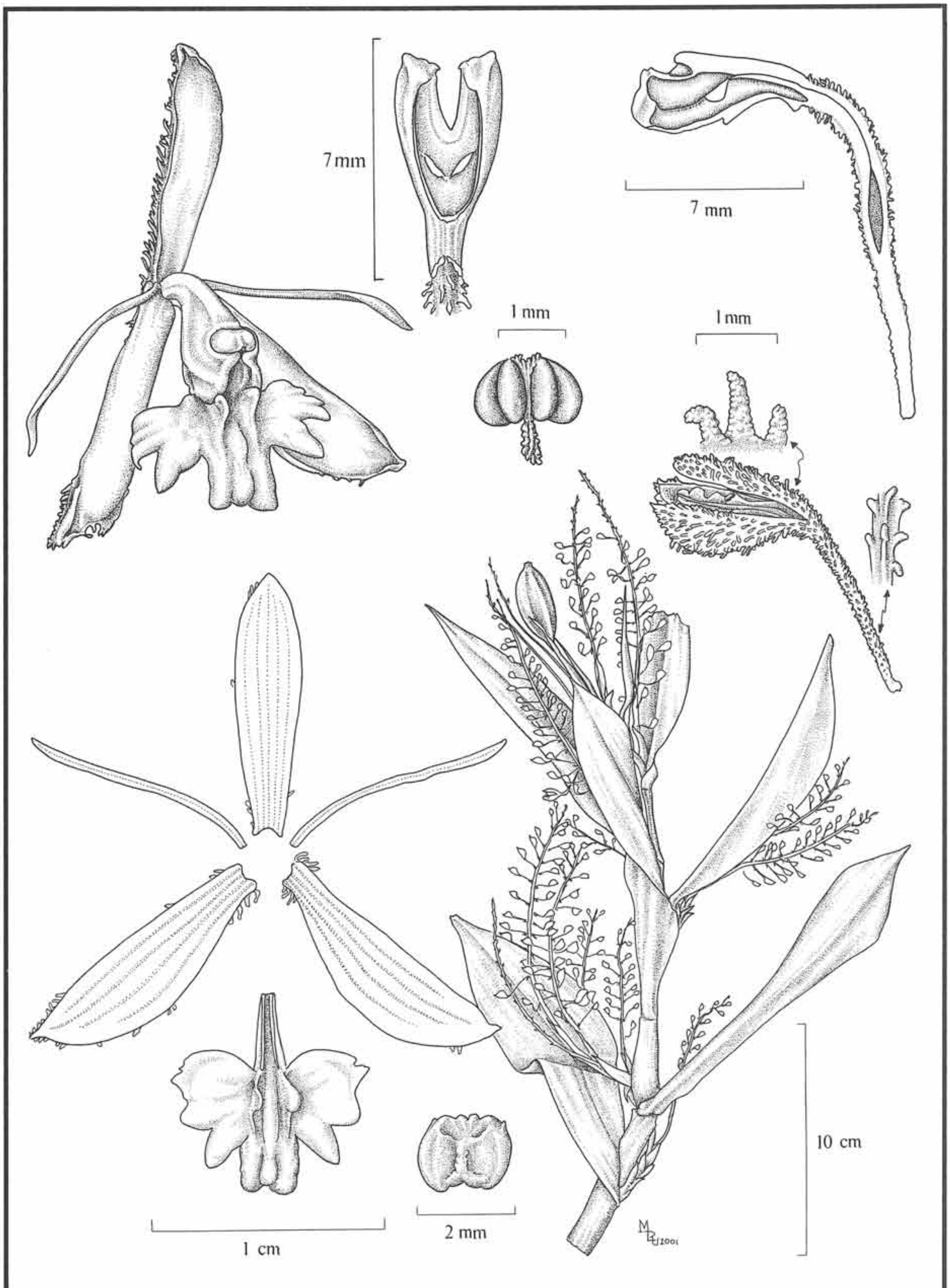


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to Mount Illiniza where the type specimen was collected.

Author: L. Sánchez S. **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM MURICATISEPALUM Hágsater Plate 764

EPIDENDRUM MURICATISEPALUM Hágsater, *sp. nov.*

Type: COSTA RICA: San José: Pérez Zeledón, Cordillera deTalamanca. Estación Cuerecí. Sendero al Mirador, 09°33'20" N 83°40'15" W, 2600 m, epífita, en bosque secundario, 18 August 1995. ***Billen Gamboa & A. Picado 256.*** Holotype: INB! (Illustration voucher).

Epidendro pergameneo Rchb.f. simile sed ovario sepalisque extus muricato-strigosis tricomatibus submoniliformibus, segmentis floralibus majoribus, labelli proportionibus dissimilibus, lobulo medio quadrato recedit.

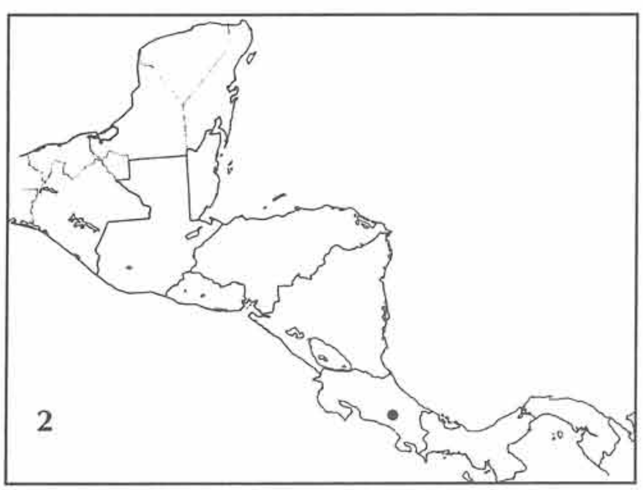
Hierba epífita, cespitosa, 30-100+ cm de alto. **Raíces** no vistas. **Tallos** sencillos, tipo caña, lateralmente aplanados, rectos, de 0.3-1.35 cm de grosor. **Hojas** numerosas, distribuidas a lo largo del tallo, alternas; vainas tubulares, estriadas en seco, 3.5-4.3 x 0.95-1.35 cm; lámina oblongo elíptica, ápice acuminado, lisa, margen entero, 9-17 x 1.0-4.6 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical y lateral entre las hojas apicales, pluriracemosa, plurianual, produciendo racimos sencillos el primer año de floración y de los entrenudos del pedúnculo de cada racimo hasta 3 ó 4 racimos simultáneos en años posteriores; racimos ligeramente arqueados, 11-14.5 cm de largo; pedúnculo corto, terete, levemente muricado, cubierto casi en su totalidad por un par de brácteas tubulares, finamente estriadas, parcialmente imbricadas en la base, fibrosas con el tiempo. **Brácteas florales** de la mitad de largo del ovario, gradualmente más pequeñas hacia el ápice del racimo, triangulares, acuminadas, hasta 7 mm de largo. **Flores** ca. 45 por racimo, sucesivas, muchas abiertas en un momento dado, resupinadas, botones verdes, flores amarillas, sin datos de fragancia. **Ovario** delgado, terete, no inflado, densamente muricado estrigoso, los tricomas submoniliformes; hasta 12 mm de largo. **Sépalos** entreabiertos, libres, oblanceolados, agudos a redondeados, 4-5-nervados, margen extendido y entero, dorsalmente muricado estrigosos, los tricomas submoniliformes, 11.5-13 x 2.8-3.5 mm; los **laterales** oblicuos, cortamente acuminados. **Pétalos** entreabiertos, lineares, subagudos, 1-nervados, margen entero, 10-13 x 0.4 mm. **Labelo** unido a la columna, trilobado, base cordada, 6.2-8.1 x 8.4-10 mm; bicalloso, los callos prominentes, subglobosos, disco unicarinado, la carina alargada hasta el ápice del labelo, baja, roma; lóbulos laterales dolabriformes, margen sublobado, terminados hacia el ápice en un par de dientes triangulares, subagudos, 3.3 x 4.8 mm; lóbulo medio de alrededor de la mitad de tamaño que los laterales, cuadrado, retuso, margen entero, 2.4 x 2.4 mm. **Columna** ligeramente arqueada, delgada, 7 mm de largo. **Clinandrio** corto, margen entero. **Antera** subreniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales; caudículas suaves y granulosas, viscidio semilíquido. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 del largo de la cavidad estigmática. **Nectario** corto, apenas penetrando hasta el perianto, delgado, no ornamentado. **Cápsula** elíptica, sin cuello, pedicelo corto, terete, delgado, densamente muricado estrigoso, 6 mm de largo; cuerpo 40 x 17 mm, escasamente estrigoso.

Epiphytic **herb. Stems** cane-like, laterally compressed. **Leaves** numerous, distributed throughout the stem, sheaths tubular, striated when dry; blade oblong-elliptic, acuminate, margin entire. **Inflorescence** apical and lateral from the base of the apical leaves, racemose to compound racemose, flowering successively over several years producing new racemes from the internodes of the peduncles; peduncle short, nearly totally covered by a pair of partly imbricating , tubular bracts. **Floral bracts** half as long as the ovary, shorter towards the apex of the raceme, triangular, acuminate. **Flowers** up to 45 per raceme successive, many open at one time, resupinate, buds green, flowers yellow. **Ovary** thin, terete, densely muricate-strigose, trichomes submoniliform. **Sepals** partly spreading, free, oblanceolate, acute to rounded, dorsally densely muricate-strigose, the trichomes submoniliform, 4-5-veined, the laterals oblique, shortly acuminate. **Petals** partly spreading, linear, subacute, 1-veined. **Lip** united to the column, three-lobed, base cordate; bicallose, calli prominent, with an intermediate, low, rounded keel running to the apex of the lip; lateral lobes dolabriform, margin sublobed, with an apical, triangular, subacute lobe; apical lobe about half the size of the laterals, square, retuse, margin entire. **Column** slightly arched, thin. **Clinandrium hood** short, margin entire. **Anther** subreniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, subequal, caudicles soft and granular. **Rostellum** apical, slit. **Nectary** short, only penetrating as far as the perianth. **Capsule** elliptic, with a short, densely muricate-strigose pedicel, body scarcely strigose.

OTHER SPECIMENS: COSTA RICA: Heredia: Headwaters of the Río Santo Domingo, ca. 3 km NE of San Rafael de Vara Blanca, N slope of Volcán Barva, 2060 m, 17 IV 1986, *Grayum 7223*, AMO! MO! USJ!

DISTRIBUTION AND ECOLOGY: Known only from Costa Rica, Cordillera Central and Cordillera de Talamanca, epiphytic in primary and secondary forest at 2060-2600 m. Flowering in April and August onwards, with mature fruit from the previous year.

RECOGNITION: *Epidendrum muricatisepalum* belongs to the Polyanthum Subgroup of the Anceps Group, characterized by the sympodial, caespitose habit, simple, cane-like stems, generally elongate, pluri-racemose inflorescence producing successive racemes over the yearws, and the fleshy lip. The new species recognized by the caespitose habit, pluriannual, pluriracemose inflorescence of small, fleshy flowers; the species is recognized by the densely muricate-strigous ovary and dorsal surface of the sepals. It is closely related to *Epidendrum pergameneum* which has the same habit including the lateral inflorescences, but the flowers have glabrous, unornamented sepals and ovary, the sepals are 7 mm long and the lobes of the lip twice as long as broad. *Epidendrum myodes* Rchb.f. has much smaller flowers.

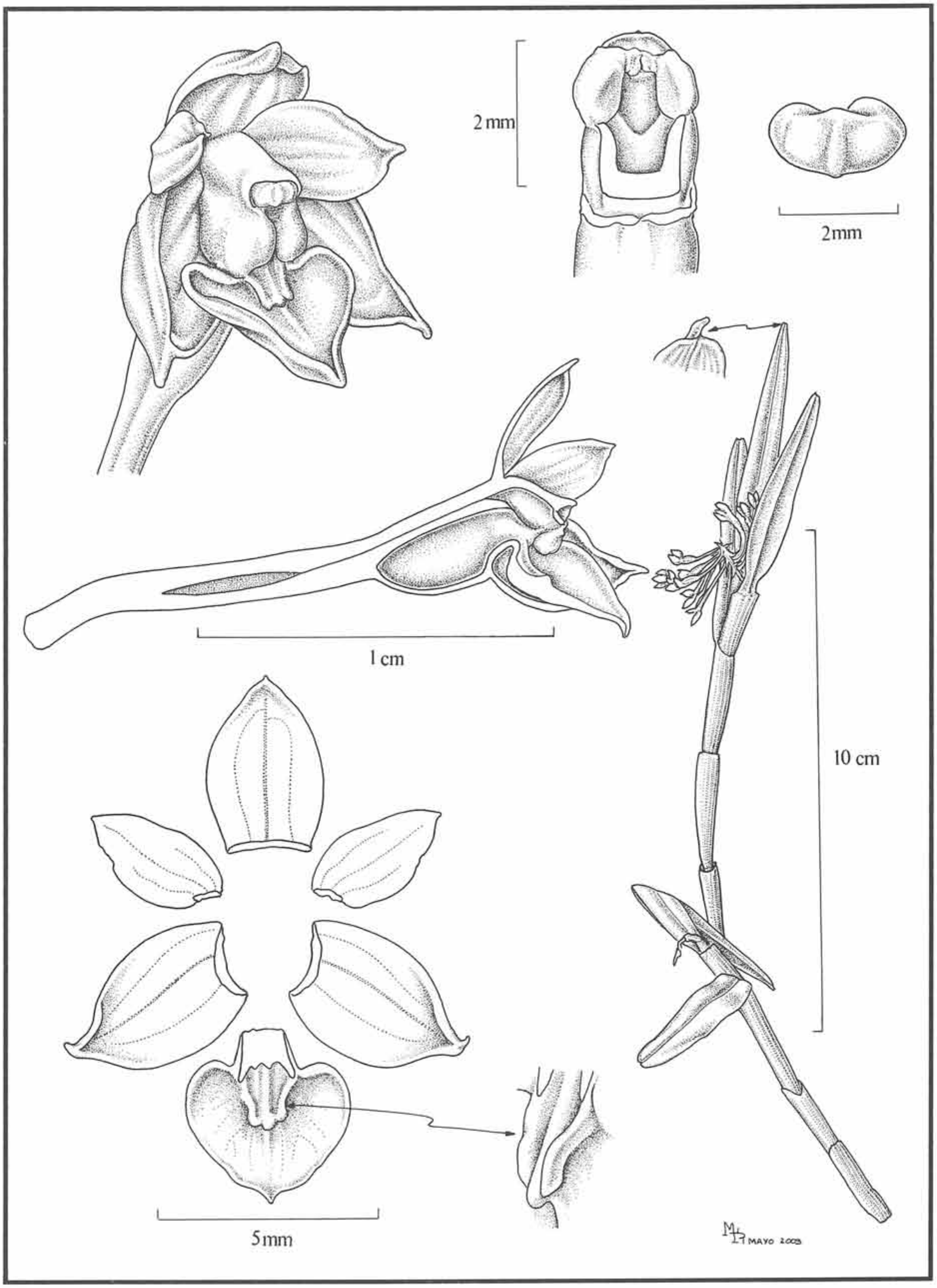


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Latin *muricatus*- rough, with short hard points, and sepals, in reference the characteristic muricate-strigose ornamentation of the outer side of the sepals.

Author: E. Hágsater **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM MYTIGASTROPODIUM Hágsater & E. Santiago

Plate 765

EPIDENDRUM MYTIGASTROPODIUM Hágsater et E. Santiago, *sp. nov.*

Type: COLOMBIA: Cauca, El Tambo, 3000 m, 25 November 1939, ***Kjell von Sneidern 2003.*** Holotype: AMES! (ex Herb. Garay 1586; Illustration voucher). Isotypes: AMES 66626! G! S! US!

Epidendro gatropodio Rchb.f. simile sed petalis ovatis 3-nervatis, labello cordiformi cum 3 carinis ad disci dimidium junctantibus et structuram nasiformem formantibus differt.

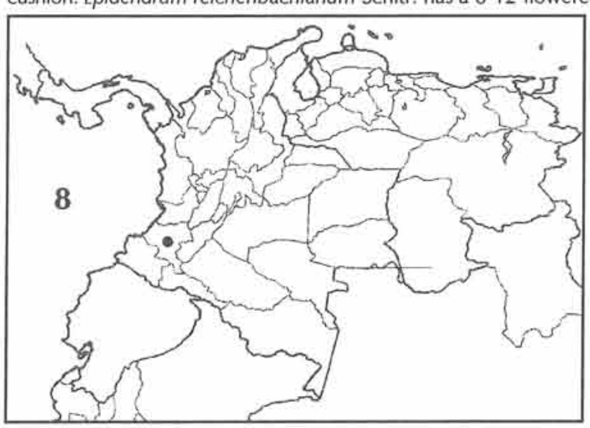
Hierba epífita, ramificada, de más de 50 cm de alto. **Raíces** en el tallo basal no vistas, escasas en algunas ramas sucesivas, carnosas, delgadas, blancas, 0.5-0.8 mm. **Tallos** originándose de los entrenudos apicales del tallo anterior, tipo caña, teretes, rectos, los apicales gradualmente más cortos; el tallo basal no visto; las ramificaciones, 7.5-19.5 x 0.25-0.45 cm. **Hojas** en el tallo basal no vistas, 2-4 en las ramificaciones, distribuidas hacia el ápice de los tallos, alternas, generalmente caedizas; vaina tubular, finamente estriada, 16-26 x 2.5-4.5 mm; lámina lanceolada, ápice desigualmente bilobado, diminutamente apiculado, lisa, subcoriácea, margen entero, 2.6-6.2 x 0.6-0.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueado nutante, densa, subsésil, florece una sola vez, 1.0-1.2 cm de largo; pedúnculo muy corto, terete, delgado, desprovisto de brácteas, 4 mm de largo; raquis terete, delgado, oculto casi en su totalidad por la brácteas florales, 8 mm de largo. **Brácteas florales** de la mitad del largo del ovario, linear lanceoladas, largamente acuminadas, abrazadoras, 2-5 mm de largo. **Flores** 15-20, simultáneas, resupinadas, colgantes, sin datos de color pero rosadas en ejemplares herborizados, sin datos de fragancia. **Ovario** terete, delgado, liso, inflado ventralmente en el ¼ apical, 9-13 mm de largo. **Sépalos** entreabiertos, libres, ápice agudo, con una quilla dorsal, 3-nervados, margen entero, 3.8-4.4 x 2.6–2.7 mm; el **dorsal** elíptico; los **laterales** ovados. **Pétalos** entreabiertos, libres, ovados, oblicuos, agudos, 3-nervados, las nervaduras laterales cortas, margen inferior ligeramente irregular hacia la mitad apical, 3.3 x 1.7 mm. **Labelo** unido en el ½ basal de la columna, entero, cordiforme, base cordada, diminutamente apiculado, margen entero, 3.2 x 3.7 mm; ecalloso, con tres quillas que forman una plataforma carnosa y conspicua, llamada cojín, trilobulada hacia el ápice, alargada hasta la mitad del labelo, en forma de nariz; en la base el labelo forma un mentón al estar doblado hacia abajo y hacia atrás antes del ápice de la columna. **Columna** corta, arqueada hacia abajo en la base a unos 45° con respecto de al ovario, recta arriba, gruesa, con un par de lóbulos ventrales apicales redondeados, muy carnosos, 2 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, provista de una quilla roma al frente. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando ¼ del ovario, inflado prominentemente detrás del perianto, liso. **Cápsula** no vista.

Epiphytic, branching **herb. Stems** produced from the apical internodes of the previous stem, cane-like, terete, straight, gradually shorter. **Leaves** 2-4 towards the apex of the stems; sheaths tubular, minutely striated; blade lanceolate, apex unequally bilobed, minutely apiculate, smooth, subcoriaceous, margin entire. **Inflorescence** apical, racemose, short, arching, nutant, dense, subsessile, flowering only once; peduncle very short, terete, thin; rachis terete, thin, totally hidden by the floral bracts. **Floral bracts** half as long as the ovary, linear-lanceolate, long-acuminate. **Flowers** 15-20, simultaneous, resupinate, without information of color or fragrance, but pink colored in dry specimens. **Ovary** terete, thin, smooth, inflated ventrally at the apical 1/4. **Sepals** partly spreading, free, apex acute, with a dorsal keel, 3-veined, margin entire, **dorsal** elliptic, **laterals** ovate. **Petals** partly spreading, free, ovate, oblique, acute, 3-veined, the lateral veins short, lower margin slightly irregular along the apical half. **Lip** united to the column along its basal 1/2, entire, cordiform, base cordate, apex minutely apiculate, margin entire; ecallose, with three keels which form a conspicuous, nose-shaped structure (cushion), three-lobed towards the apex, reaching the middle of the lip; base of the lip forming a mentum as it is bent down and backwards, below the apex of the column. **Column** arching downwards at the base at a 45° angle with respect to the ovary, straight thereafter, thick, with a pair of rounded, ventral, apical lobes. **Clinandrium hood** short, margin entire. **Anther** reniform, provided with a low, rounded keel in front. **Rostellum** apical, slit. **Nectary** penetrating 1/4 of the ovary, prominently inflated, smooth.

OTHER SPECIMENS: COLOMBIA: Cauca, El Tambo, ca. 3000 m, 9 XI 1936, *Sneidern 1089,* AMES x2! S!

DISTRIBUTION AND ECOLOGY: Apparently endemic to the southern department of Cauca, Colombia, at 3000 m altitude. Flowering in November.

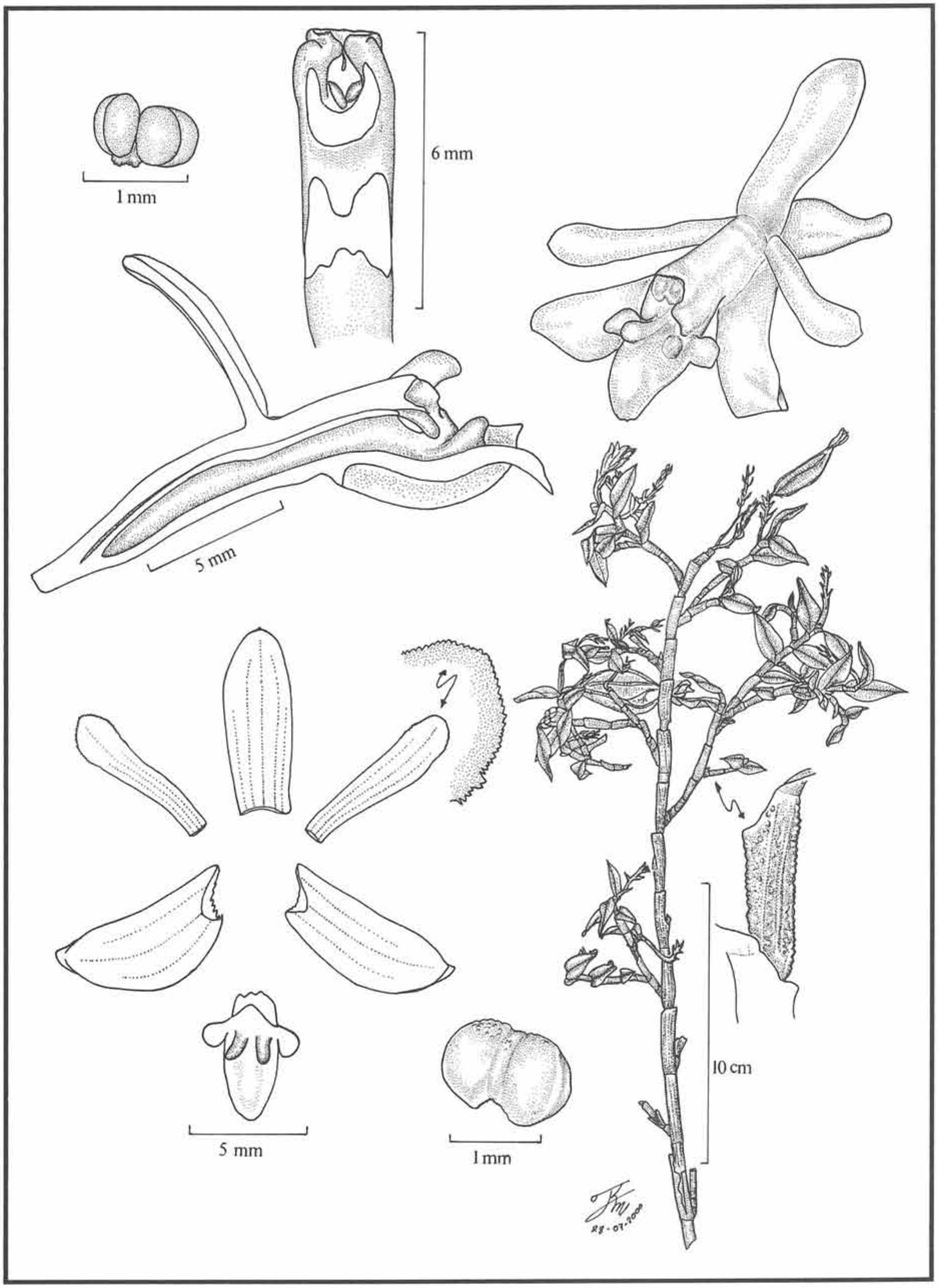
RECOGNITION: *Epidendrum mytigastropodium* belongs to the Diothonea Group and Gastropodium Subgroup, characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally to obliquely to free, the Subgroup which has small, usually brightly-colored pink to purple flowers, a very short inflorescence, lip more or less cordiform, united to the basal half of the column, and forming a sac at the base as it is bent down and backwards before the apex of the column, the column ending in fleshy-thickened lobes. The new species has relatively large leaves (2.6-6.2 x 0.6-0.7 cm), 15-20 flowers, ovate, acute, 3-veined petals, a cordiform, ecallose lip with three subequal keels which are united at the apex forming a cushion trilobulate which form a conspicuous, nose-shaped structure. It has been confused with *Epidendrum nubigenum* Rchb. f. which is similar but has shorter, narrower leaves (4-5.5 x 0.4-0.5 cm), a 6-10-flowered inflorescence, oblong, 1-veined petals, and the lip with 3 parallel keels and a crenulate clinandrium. It is also similar to *Epidendrum eugenii* Schltr. which has 20-25 flowers, linear-oblong petals, the ovate lip has three, narrow, low keels of the lip ending in three parallel ridges which do not unite nor form a transverse cushion. *Epidendrum reichenbachianum* Schltr. has a 6-12-flowered inflorescence, short, 5-6.5 long ovaries, obliquely oblong, 1-veined petals, and an ovate-rhombic lip. *Epidendrum gastropodium* also has acute floral segments and the lip has three, short keels which form a prominent transverse cushion at the base of the lip. *Epidendrum melanogastropodium* Hágsater & Dodson has obtuse to rounded floral segments, and the lip has an orange-colored, transverse, prominent cushion near the base, the flowers being deep purple with the column and anther usually black.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek μυτη- nose, γαστηρ- belly, and ποδιον- foot, in reference to the nose or beak formed by the keels in the middle of the lip and the Gastropodium Group which share the inflated belly or ovary.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM NEVADENSE Hágsater & E. Santiago

Plate 766

EPIDENDRUM NEVADENSE Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Risaralda: Santa Rosa de Cabal; Camino Real entre Termales de Santa Rosa y Hda. La Sierra; 4°49'N 75°29.5' W, 3670 m, Selva alta andina, 24 Mar. 1986. ***Jan Wolf 890.*** Holotype: SEL! (Illustration voucher). Isotype: U!

Epidendro scabro Ruiz & Pavón simile sed planta valde ramosa, inflorescentia racemosa, floribus leviter minoribus, labelli lobulis lateralibus parvis rotundatis, ovario leviter ventraliter inflato in 2/3 partibus suae longitudinis discrepans.

Hierba epífita, erecta, ramificada, de más de 30 cm de alto. **Raíces** no vistas. **Tallos** ramificados, que a su vez se ramifican en la mitad apical, tipo caña, teretes, rectos, el principal más de 30 x 0.3-0.5 cm, las ramas secundarias 2-9 x 0.15-2.0 cm; las ramas terciarias 2.0-5.5 x 0.1-0.25 cm. **Hojas** del tallo principal no vistas, 3-6 en las ramas, distribuidas a lo largo de los tallos, desiguales, progresivamente más grandes hasta la penúltima; vainas tubulares, finamente rugosas hasta algo verrugosas, de 0.4-2.0 cm de largo; lámina lanceolada, ápice agudo a retuso, quilla dorsal evidente, margen diminutamente y escasamente eroso hacia el ápice, lisa, verde, 0.5-3.0 x 0.4-0.9 cm. **Bráctea espatacea** ausente. **Inflorescencia** apical, tanto en el tallo principal como en las ramificaciones, florece una sola vez, racemosa, arqueada, 1.6-3.6 cm de largo; pedúnculo corto, terete, no ornamentado, sin brácteas, 4 mm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, acuminadas, 2.5-4 mm de largo. **Flores** 7-15, simultáneas, resupinadas, de color rosado, sin datos de fragancia. **Ovario** terete, delgado, ligeramente engrosado ventralmente en los 2/3 apicales, no ornamentado, 8-14 mm de largo. **Sépalos** elípticos, redondeados, margen entero, carnosos, 3-nervados, el **dorsal** extendido, 7.6 x 3.0 mm; los **laterales** entreabiertos, connados a la base de la columna, oblicuos, con una quilla dorsal, margen extendido, 7.3 x 3.4 mm. **Pétalos** extendidos, oblanceolados, redondeados, 1-nervados, las nervaduras ramificadas, margen extendido, finamente eroso en la región apical, carnosos, 8 x 1.7 mm. **Labelo** unido a la columna, trilobado, base truncada, margen entero, 4.3 x 4.1 mm; bicalloso, los callos prominentes y alargados; disco del labelo desprovisto de carinas, con un par de venas engrosadas inconspícuas, desvaneciéndose hacia el ápice del labelo; lóbulos laterales pequeños, suborbiculares, redondeados, 1 x 1 mm; lóbulo medio mucho más grande, ovoide, redondeado, 4 x 2 mm. **Columna** recta, 6 mm de largo. **Clinandrio** corto, margen entero. **Antera** reniforme, provista de una vena engrosada en su parte media, superficie papilosa, 4-locular. **Polinios** 4, suborbiculares, lateralmente comprimidos, desiguales, caudículas suaves y granulosas. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de más de la mitad del largo de la cavidad estigmática. **Nectario** penetrando 3/4 partes del ovario (en los ovarios más largos, penetrando cerca de la mitad), inflado a todo lo largo, no ornamentado. **Cápsula** elipsoide, 3-3.5 cm de largo total, pedicelo 2 mm de largo, cuerpo 2.4-3 x 1.6 cm, cuello apical 4 mm de largo.

Epiphytic, branching **herb. Stems** terete, a tall main stem with small secondary and tertiary branches. **Leaves** 3-6 on the branches, sheaths rugose to somewhat verrucose, blade of the main stem not seen, on the branches short, lanceolate, acute, retuse, margin minutely and scarcely erose towards the apex. **Spathaceous bract** absent. **Inflorescence** apical, short, arching, racemose. **Flowers** 7-15, simultaneous, resupinate, pink. **Floral bracts** shorter than the ovary, triangular, acuminate. **Ovary** thickened ventrally in the apical half to 2/3. **Sepals** spreading, elliptic, rounded, 3-veined, the **laterals** connate, ata the base, dorsally keeled. **Petals** oblanceolate, rounded, 1-veined, margin finely erose in the apical region, . **Lip** 3-lobed, bicallose, the calli prominent and elongate; lateral lobes small, suborbicular; midlobe much larger, ovoid, rounded. **Column** straight. **Clinandrium hood** short, entire. **Anther** reniform, papillose. **Nectary** penetrating half to 3/4 of the ovary, inflated throughout, unornamented.

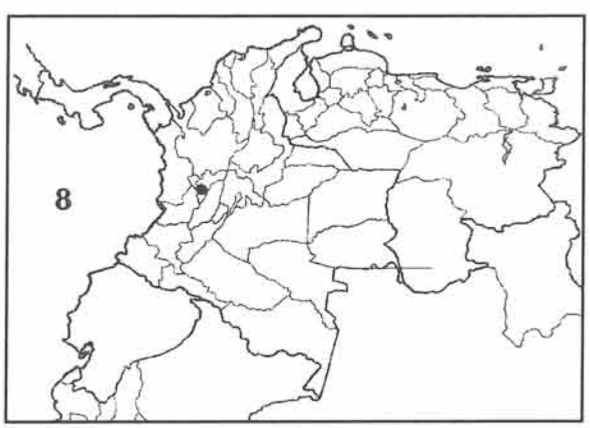
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Endemic to Colombia, in the Cordillera Central, west of Bogotá, in the Parque Los Nevados, at 3670 m altitude. Known only from the type, in high Andean forest with *Escallonia myrtilloides* and *Weinmannia mariquitae* Szyszyl. Epiphytic on *W. mariquitae*. Flowering in February-March.

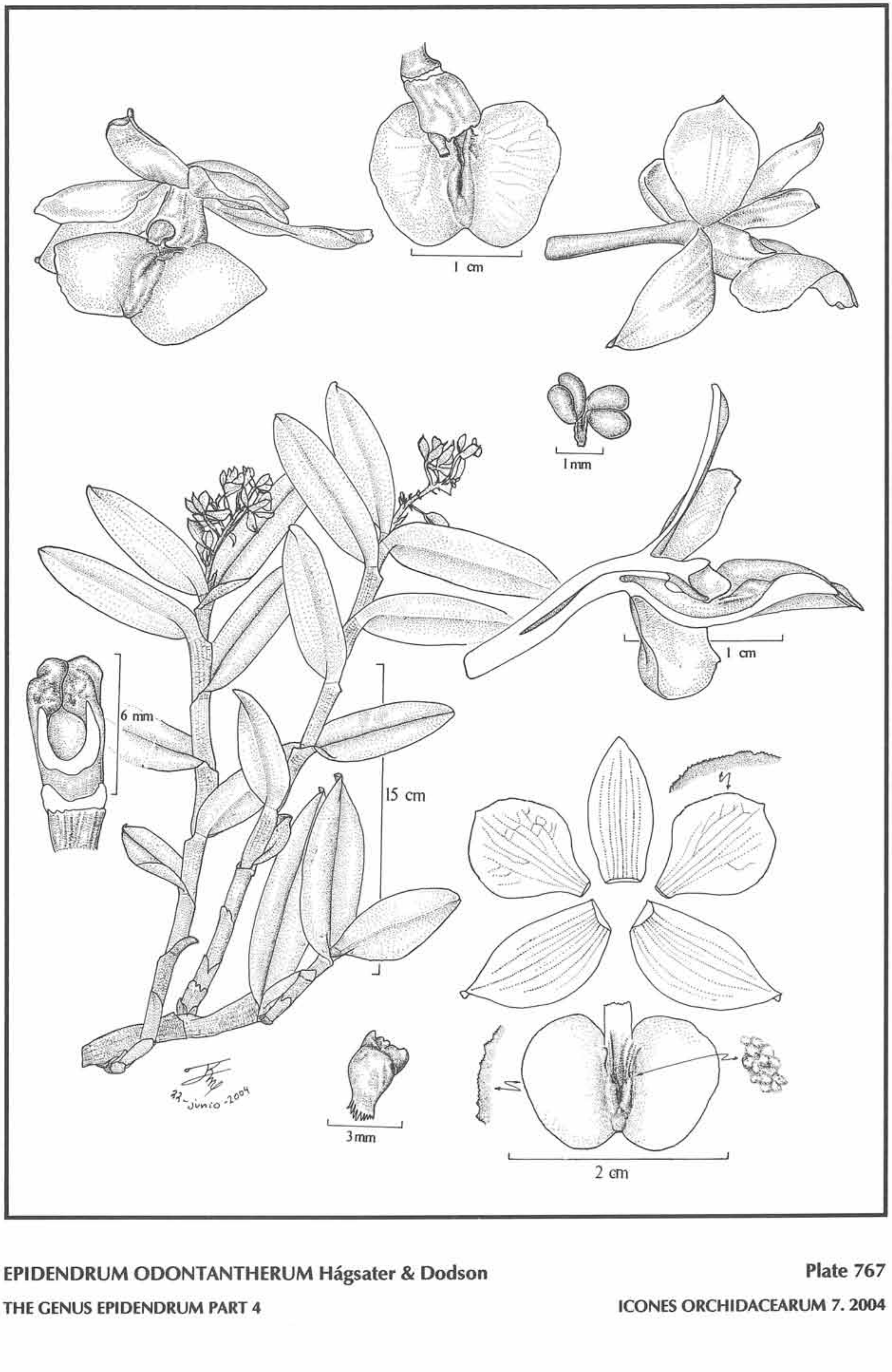
RECOGNITION: *Epidendrum nevadense* belongs to the Scabrum Group, Fritzianum Subgroup recognized by the branching habit, acute leaves, rugose, adpressed sheaths, and three-lobed lip. The new species has 7.3-7.6 mm long sepals, the lateral lobes of the lip much smaller than the midlobe, ovary ventrally inflated. *Epidendrum scabrum* has larger flowers, sepals 8.8-10 mm long, the lateral lobes of the lip as large as the midlobe, hemiovate, and the ovary not inflated. Though *Epidendrum cernuum* Kunth has a somewhat similar lip, the leaves are apically bilobed and longer, prominently aristate lateral sepals, a much more floriferous inflorescence, the lateral lobes of the lip obliquely ovate, obtuse and the clinandrium prominent, funnel-shaped, erose. *Epidendrum pittieri* Ames has large, greenish white flowers, the sepals 13-14 mm long, the lateral lobes of the lip are as large as the midlobe, and the column 10-11 mm long.

CONSERVATION STATUS: DD. Data deficient. The species was collected within the protected area of Parque Los Nevados.

ETYMOLOGY: In reference to the Parque Los Nevados, where the type was collected.



Authors: E. Hágsater & E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM ODONTANTHERUM Hágsater & Dodson **Plate 767**

EPIDENDRUM ODONTANTHERUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Pichincha: W of Calacalí, W slopes of Cordillera Occidental, km 21 on road from Calacalí, 2500 m, 24 May 1979, ***Bernt Løjtnant & Ulf Molau 13673.*** Holotype: AAU! (Illustration voucher). Isotype: GB!

Epidendro renilabioide Hágsater & Dodson simile sed petalis latioribus, anthera ad marginem apicalem profunde dentato-fimbriata, labelli depressione centrali longa, carinis incrassatis versus labelli ¾ partem conjungentibus differens.

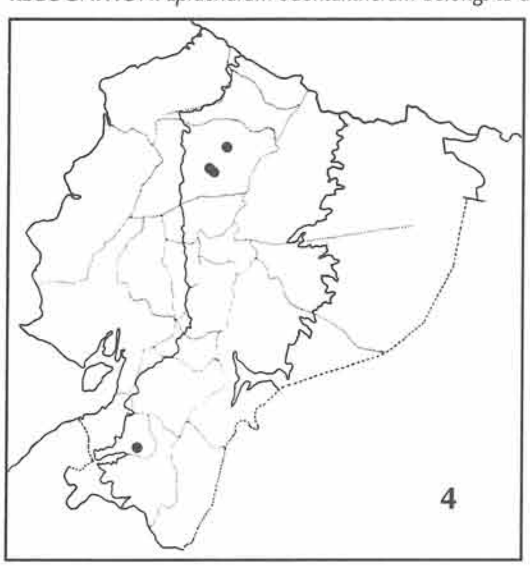
Hierba terrestre y epífita, erecta, monopodial, ramificada arriba en plantas maduras, de 100-150 cm de alto. **Raíces** no vistas, probablemente solo de la base del tallo principal. **Tallos** tipo caña, teretes abajo, algo lateralmente comprimidos hacia el ápice, rectos, el principal no visto, las ramas 29-40 x 0.58-1.5 cm. **Hojas** en el tallo principal no vistas, 8-12 en las ramas, distribuidas a todo lo largo de las mismas, alternas, articuladas; vaina tubular a ligeramente infundibuliforme en seco, estriada y rugosa, 1.5-5.5 x 0.58-1.5 cm; lámina oblonga a angostamente elíptica, ápice bilobado, con una quilla dorsal baja, coriácea, margen entero, 4.5-13.5 x 1.8-3.5 cm. **Inflorescencia** apical, racemosa a paniculada, arqueada, densa, multiflora, 6.5-9 cm de largo; pedúnculo grueso, corto, 1.1-1.5 cm de largo, provisto en la parte media de 1 bráctea, triangular, aguda, abrazadora, 8-12 mm de largo, frecuentemente produciendo desde la bráctea un racimo secundario, con botones florales en desarrollo cuando el principal está en floración; raquis recto, terete. **Bráctea espatácea** ausente. **Flores** 15, resupinadas, simultáneas, aunque algunas basales presentes aún en botón floral, sépalos y pétalos verde claro cuando jóvenes tornándose verde amarillento, labelo blanco verdoso; sin fragancia. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 2-4 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 10-18 mm de largo. **Sépalos** entreabiertos, libres, elípticos, agudos, diminutamente apiculados, 7-8-nervados, carnosos, margen entero, 13-14 x 5.0-7.5 mm; los **laterales** ligeramente oblicuos. **Pétalos** entreabiertos, libres, orbiculares, unguiculados, ápice obtuso, apiculados, 4-5-nervados, las nervaduras muy ramificadas hacia la mitad apical, margen diminutamente denticulado, 12 x 9 mm. **Labelo** unido a la columna, reniforme, base profundamente cordada, ápice emarginado, margen diminutamente denticulado, 12 x 17.4 mm; ecalloso, disco con un par de quillas radiantes en la base y una cavidad en forma de canal, bordeado por paredes muy carnosas en el ápice, que se fusionan con una quilla corta, muy gruesa y carnosa que se alarga hasta el seno apical del labelo. **Columna** corta, gruesa, recta, 6 mm de largo, clinandrio dirigido ligeramente hacia arriba. **Clinandrio** corto, carnoso, margen entero. **Antera** ovoide, con el ápice dentado-fimbriado, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas cortas, granulosas. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/3 del largo de la cavidad estigmática. **Nectario** poco profundo, apenas penetrando el ovario, no inflado, no ornamentado. **Cápsula** no vista.

Tall terrestrial or epiphytic, erect, monopodial **herb**, branching above. **Roots** from the base of the main stem. **Stems** cane-like, terete below, somewhat compressed above, straight. **Leaves** 8-12 distributed throughout the branches, alternate, articulate; sheath tubular, somewhat infundibuliform when dry, striated and rugose; blade oblong to narrowly elliptic, apex bilobed, with a low dorsal keel, coriaceous, margin entire. **Inflorescence** apical, racemose to paniculate, arching, dense, many-flowered; peduncle thick, short, provided with a single intermediate, triangular, acute bract; frequently producing a secondary raceme from the bract, with floral buds developing when the main raceme is in full flower; rachis straight, terete. **Flowers** 15, resupinate, simultaneous, though some basal buds may be just opening; sepals and petals pale green turning yellowish green, lip greenish white, without fragrance. **Floral bracts** small, much shorter than the ovary, acute. **Ovary** terete, thin, smooth. **Sepals** partly spreading, free, elliptic, acute, minutely apiculate, 7-8-veined, fleshy, margin entire; the **lateral** slightly oblique. **Petals** partly spreading, free, orbicular, unguiculate, apex obtuse, apiculate, 4-5-veined, the veins much branched above the middle, margin minutely denticulate. **Lip** united to the column, reniform, base deeply cordate, apex emarginate, margin minutely denticulate; ecallose, disc with a pair of radiating lateral keels, a canal-shaped cavity, bordered towards the apex by very fleshy keels which fuse with a short, very thick mid-keel that runs to the apical sinus of the lip. **Column** short, thick, straight, the clinandrium directed slightly upwards. **Clinandrium hood** short, fleshy, margin entire. **Anther** ovoid, the apex dentate-fimbriate, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles short, granulose. **Rostellum** apical, slit. **Nectary** shallow, barely penetrating the ovary, thin, smooth.

OTHER SPECIMENS: ECUADOR: El Oro: Guayquichuma, 2100 m, 9 II 1998, *Bonifaz 3655*, MO! **PICHINCHA:** Chiriboga, 2100-2200 m, 23 VIII 1984, *Dodson 14357*, MO! (Illustr., AMO!) QCA! QCNE x2! Reserva Río Guajalito, near Chiriboga, 1850 m, 5 VII 1991, *van der Werff 12210*, MO! (Illustr. AMO!) QCNE!

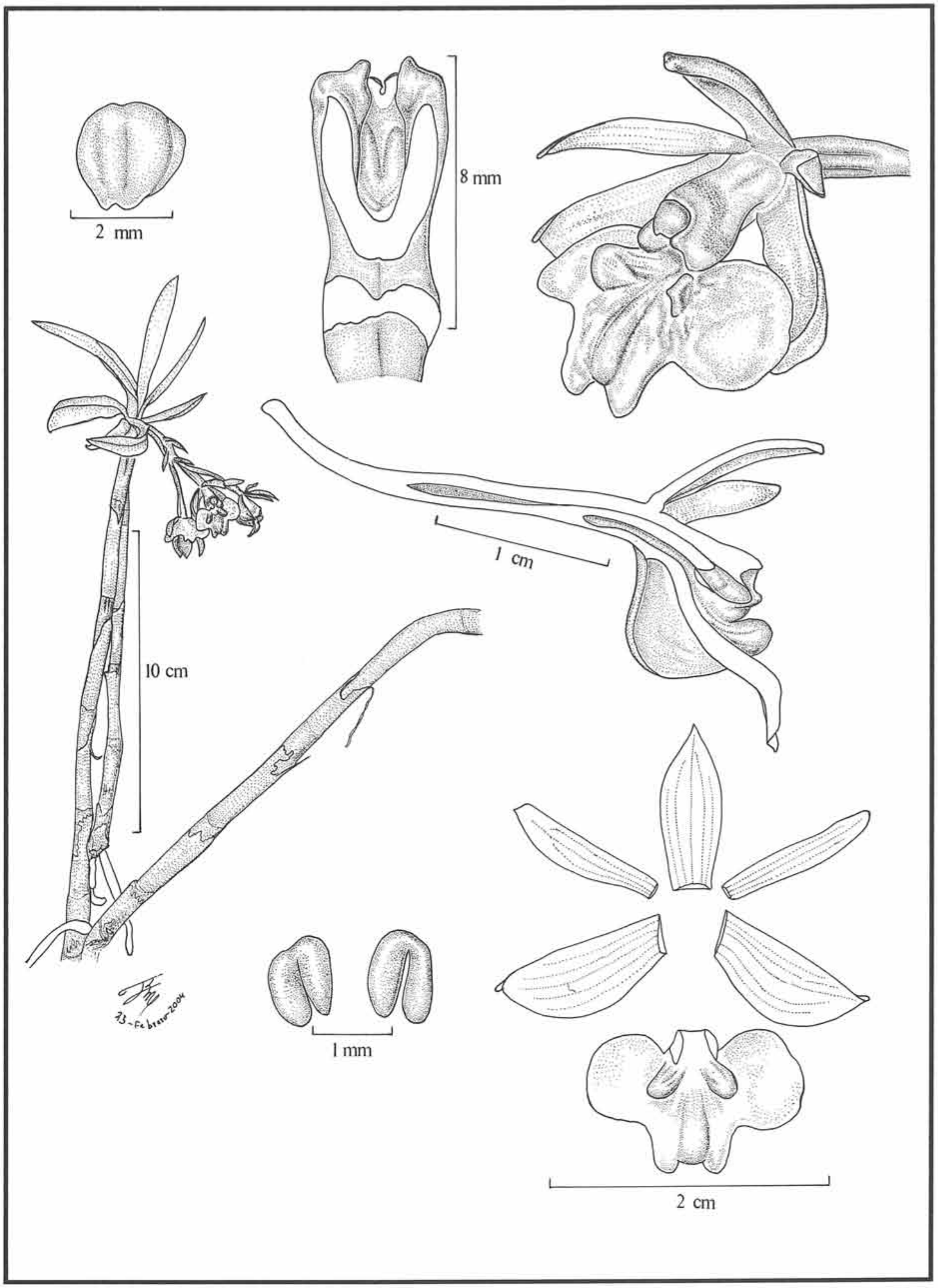
DISTRIBUTION AND ECOLOGY: Known only from central Ecuador on the upper Pacific slope of the Andes in the Provinces of Pichincha and El Oro, at 1850-2500 m altitude, in cloud forest and montane forest, Lauraceae. Flowering from February to August.

RECOGNITION: *Epidendrum odontantherum* belongs to the Cernuum Group, Renilabium Subgroup which is characterized by the tall plants, monopodial, branching habit, large, bilobed leaves, racemose inflorescence, entire to bilobed lip with a channel at the base of the lip between the calli. The new species is recognized by the secondary raceme which is produced from the bract of the peduncle with the buds developing when the main raceme is in full flower; the lip has a basal channel-shaped depression at the base, bordered by a pair of keels which become very thick towards the apex, where they fuse with a thick apical keel. *Epidendrum sagasteguii* Hágsater, has flowers which open from the base of the inflorescence towards the apex, the flowers are similarly sized, but the petals have an irregular erose margin, the channel-like depression at the base of the lip is bordered by narrow, short keels, and the apical keel is short and thick; the apex of the anther is subapiculate, margin entire. *Epidendrum renilabium* Schltr. produces the flowers from the apex of the inflorescence backwards, the flowers are concolor, green, the sepals are 14-18 mm long, and the petals have an entire margin. *Epidendrum renilabioides* has flowers which open from the apex of the inflorescence towards the base, white to bronzy greenish, the lip is reniform, apiculate, with a large "Y" shaped callus in the middle of the lip, the depression occupies only 1/3 the length of the lip; the anther is apically short-dentate.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: οδοντος, tooth, and ανθηρα, the anther, in reference to the characteristic apex of the anther which is deeply dentate-fimbriate.



EPIDENDRUM OENOCHROMUM Hágsater & Dodson — **Plate 768**

EPIDENDRUM OENOCHROMUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Hort. Ecuagenera, said to come from the area of Guaranda (Bolivar), pressed 26 January 2004, col. José Portilla, ***E. Hágsater 14006.*** Holotype: AMO! (in spirit, illustration voucher).

Epidendro pomecensi Hágsater simile sed omino majore et fortiore, floribus vinaceis, callis proportione majoribus discrepans.

Hierba epífita, erecta, simpodial, de más de 23 cm de alto. **Raíces** basales, en la base de cada tallo sucesivo, escasas, carnosas, blancas. **Tallos** sucesivos, tipo caña, teretes, gruesos, rectos, el nuevo tallo se produce de la mitad del tallo anterior, de más de 23 x 0.5-0.8 cm; los tallos superiores más o menos largos, 16 x 0.5 cm. **Hojas** 3-4, agregadas en el ápice del tallo, coriáceas; vainas tubulares, finamente estriadas, fibrosas con el tiempo, 3-3.5 x 0.5-0.8 cm; lámina oblongo oblanceolada, subaguda, margen entero, 2.5-5 x 0.6-0.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada nutante, florece una sola vez, corta, 2.5 cm de largo; pedúnculo corto, terete, delgado, recto, desprovisto de brácteas, 13 mm de largo. **Brácteas florales** más cortas que el ovario, triangular lanceoladas, agudas, abrazadoras, 8.3 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 22 mm de largo. **Flores** 6, sucesivas, estando 3 abiertas de manera simultánea, resupinadas, de color rojo borgoña, la columna verde con una franja rojiza cerca del ápice; sin fragancia. **Sépalos** entreabiertos, libres, angostamente obovados, agudos, 5-nervados, margen entero, los **laterales** oblicuos, con una quilla dorsal diminuta, 11.7-13 x 4.2-5 mm. **Pétalos** entreabiertos, libres, oblongos, obtusos, 3-nervados, margen entero, 11.7 x 2.2 mm. **Labelo** unido a la columna, trilobado, base cordada, margen entero, 10 x 16 mm; bicalloso, los callos prominentes, ligeramente divaricados; disco provisto de 1 quilla intercallosa, prominente, carnosa, obtusa, lisa; lóbulos laterales orbiculares, 6 x 7 mm; lóbulo medio subcuadrado, bilobado, anchamente mucronado, 3.5 x 5.7 mm. **Columna** recta, ensanchada hacia el ápice, 8 mm de largo. **Clinandrio** corto, margen entero. **Antera** obovoide, 4-locular. **Polinios** 4, ovoides, lateralmente comprimidos, subiguales, fusionados en la base. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 de largo de la cavidad estigmática. **Nectario** penetrando ligeramente el perianto, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, erect, sympodial **herb. Roots** basal, at the base of the successive stems, few, fleshy, white. **Stems** successive, cane-like, terete, straight, thick, the new stem produced from a middle internode of the previous stem. **Leaves** 3-4, aggregate towards the apex of the stems, coriaceous; sheaths tubular, minutely striated, fibrous in time; blade oblong-oblanceolate, subacute, margin entire. **Inflorescence** apical, racemose, nutant, arching, flowering only once, short; peduncle short, terete, thin, straight. **Floral bracts** shorter than the ovary, triangular-lanceolate, acute. **Ovary** terete, thin, smooth. **Flowers** 6, successive, 3 open at one time, resupinate, burgundy-red, the column green with a reddish band near the apex, without fragrance. **Sepals** partly spreading, free, narrowly obovate, acute, 5-veined, margin entire, the **laterals** oblique, with a minute dorsal keel. **Petals** partly spreading, free, oblong, obtuse, 3-veined, margin entire. **Lip** united to the column, 3-lobed, base cordate, margin entire; bicallose, the calli prominent, slightly divaricate; disc with a prominent, fleshy, obtuse, smooth median keel; lateral lobes orbicular; midlobe subquadrate, bilobed, widely mucronate. **Column** straight, thickened towards the apex. **Clinandrium hood** short, margin entire. **Anther** obovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, subequal, joined at the base. **Rostellum** apical, slit. **Nectary** slightly penetrating the ovary, narrow, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: From a cultivated plant said to come from central Ecuador: near Guaranda in the province of Bolivar. Flowering in January.

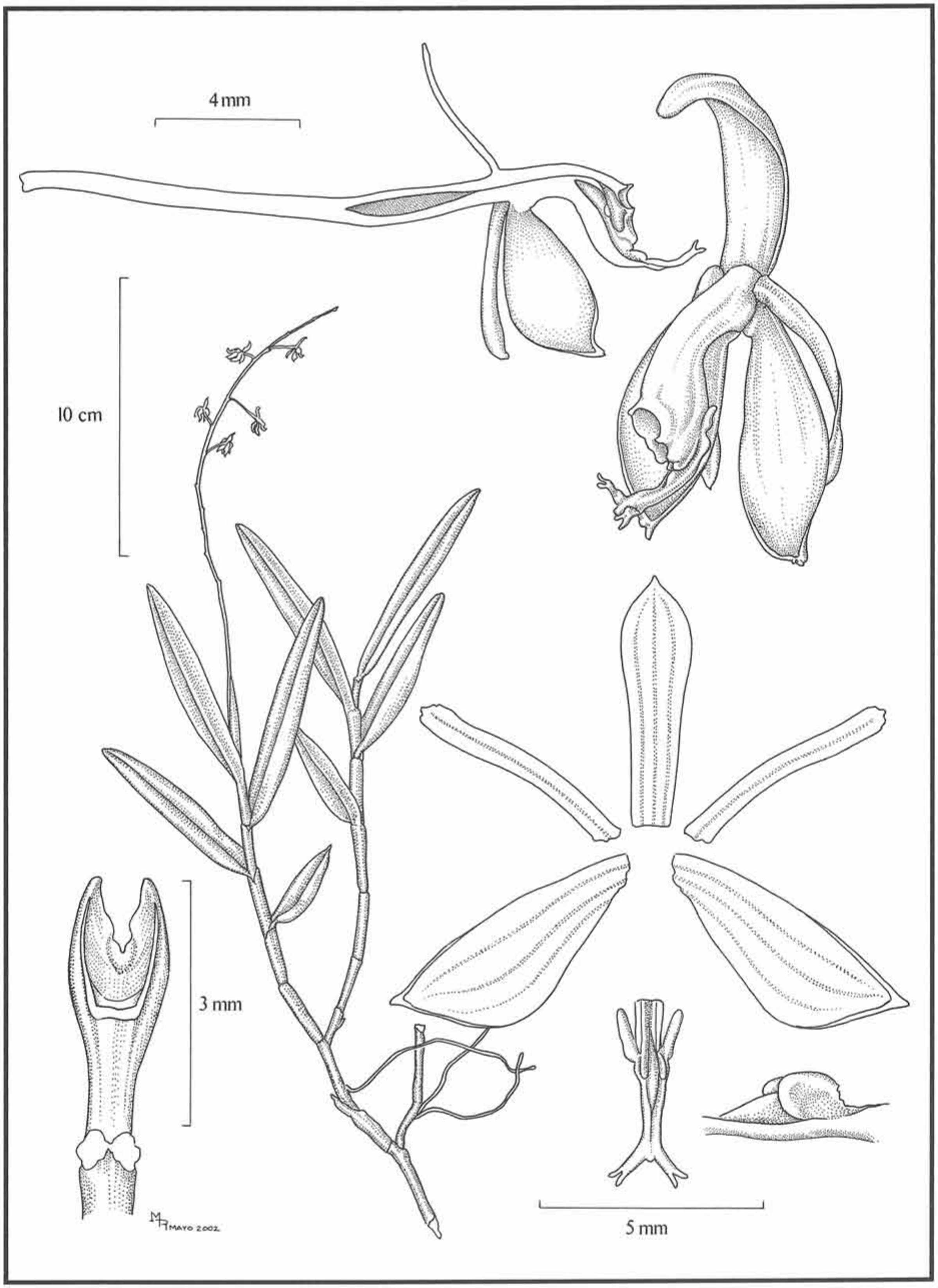
RECOGNITION: *Epidendrum oenochromum* belongs to the Arbuscula Group, Incomptum Subgroup, characterized by the sympodial habit, the new growth produced from the mid-nodes of the previous cane-like growth below the leaves, the apical inflorescence flowering one time only, and the roots produced at the base of each new growth, not at the intermediate nodes, the flowers fleshy. The new species is recognized by the fleshy, thickened, burgundy-red floral segments, the orbicular lateral lobes of the lip, oblong, 3-veined petals. It is somewhat similar to *Epidendrum pomecense* from northern Colombia, which is much more delicate, and has green flowers with the apex of the column reddish purple. In Ecuador, *Epidendrum prietoi* Hágsater & Dodson is somewhat similar, but has dirty yellow flowers the veins purplish, 1-veined petals and short calli, the ovary somewhat inflated ventrally towards the apical half and the lip 3-lobed. *Epidendrum homoion* Hágsater & Dodson, from the Amazon side of the Andes in Ecuador has wider floral segments (lip 14-16 x 26-28 mm), 3-veined petals, and a straight column. *Epidendrum yambalense* Hágsater & Dodson, has narrower and more acute segments, with the midlobe of the lip apiculate.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek οινος- wine, and χρωα- color, wine-colored, in reference to the color of the flowers.

Authors: E. Hágsater & C. H. Dodson **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM OPHIOCHILUM Hágsater & Dodson

Plate 769

EPIDENDRUM OPHIOCHILUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Azuay: "Oriente": Border: Eastern Cordillera, between Oña and the Río Yacuambi, west slope, 8000-9500 ft., 10-19 September 1945, ***F. Prieto 235.*** Holotype: S! (Illustration voucher). Isotype: AMES! NY!

Epidendro cylindrostenophyllo Hágsater & Dodson simile sed foliis latioribus, inflorescentia longiore, sepalis petalisque aliter coloratis et majoribus, labelli lobulis lateralibus elliptico-lanceolatis, lobulo medio ad apicem bilobato, lobulis bifurcatis recedens.

Hierba epífita, simpodial, subcespitosa, 15-40 cm de alto. **Raíces** basales, carnosas, 1.5-2 mm de grosor. **Tallos** sencillos, tipo caña, teretes hacia la base, lateralmente aplanados hacia el ápice, 12-19 x 0.4-0-7 cm, el tallo nuevo se produce del 2°-3er entrenudo del tallo anterior, a unos 2-5 cm de la base; en la zona basal con dos vainas, tubulares, obtusas, papiráceas, 2.0-4.5 x 0.4-0.7 cm. **Hojas** (2)3-4, distribuidas en el tercio apical, angostamente oblongo elípticas a lanceoladas, coriáceas, ápice aristado, con una quilla dorsal, margen entero, 4-9 x (0.8) 1.0-1.5 cm. **Bráctea espatacea** 1-2, de lados casi paralelos, aguda, 5-6 x 0.5-0.7 cm. **Inflorescencia** apical, racemosa, erecta, 15-20 cm de largo; pedúnculo lateralmente comprimido, 6-9 cm de largo; raquis algo lateralmente comprimido, no ornamentado. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, 1.5-3.0 mm de largo. **Ovario** no dilatado, terete, no ornamentado, 13-15 mm de largo. **Flores** 20 o más, simultáneas, resupinadas, segmentos verde claro en el tercio basal, dos tercios apicales rojo pardo, columna verde claro, ápice rojo pardo, labelo rojo pardo, con la base verde claro, fragancia no registrada. **Sépalos** extendidos, libres, angostamente obovados, obtusos, 3-nervados, margen entero; el **dorsal** 5.5-6.0 x 1.4-1.6 mm, los **laterales** oblicuos, 5.5-5.9 x 2.0-2.4 mm. **Pétalos** extendidos, lineares, ápice redondeado, 1-nervados, margen entero, 5.0-5.4 x 0.5-0.8 mm. **Labelo** unido a la columna, profundamente cordado, trilobado, 3.0-4.0 x 3.2-4.7mm; bicalloso, los callos laminares, extendiéndose hasta un tercio del istmo, con una quilla central engrosada, la cual se prolonga has la mitad del istmo; lóbulos laterales retrorsos, linear elíptico lanceolados, margen entero; lóbulo medio linear profundamente emarginado, alargado, en posición natural arqueado hacia arriba, frente a la columna, tercio apical bilobado, los lóbulos rectangulares y bifurcados en el ápice. **Columna** arqueada, 3-4 mm de largo. **Clinandrio** reducido, margen entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de ½ de largo de la cavidad estigmática. **Nectario** solo penetrando la mitad de la columna, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, subcaespitose **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, terete at base, laterally compressed towards the apex. **Leaves** (2)3-4, distributed throughout the apical third, narrowly oblong-elliptic to lanceolate, coriaceous, apex aristate. **Spathaceous bracts** 1-2, sides nearly parallel, acute. **Inflorescence** apical, racemose, erect, peduncle somewhat laterally compressed. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** terete. **Flowers** 20 or more, simultaneous, resupinate, all segments light green at base, reddish brown at the apex. **Sepals** spreading, free, narrowly obovate, obtuse, subapiculate, margin entire, 3-veined; **laterals** oblique. **Petals** spreading, linear, apex rounded, margin entire, 1-veined. **Lip** united to the columnm, deeply cordate, three-lobed, bicallose, the calli laminar, reaching one third of the isthmus, with a thickened central keel reaching the middle of the isthmus, lateral lobes retrorse, elliptic-lanceolate, margin entire, midlobe linear, deeply emarginate, arched upwards in front of the column, apical third bilobed, the lobes rectangular, bifurcate at the apex. **Column** arched. **Clinandrium hood** reduced, margin entire. **Rostellum** subapical, slit. **Nectary** only penetrating half the column.

OTHER SPECIMENS: ECUADOR: Loja: Km 12-14, near top of pass on road to Zamora, 2800 m, 28 IX 1961, *Dodson & Thien 760*, AAU! SEL! **Morona-Santiago**; Road Cuenca to Limón via Gualacéo, 2800 m, 16 II 1986, *Luer 2754* RPSC!

OTHER RECORDS: ECUADOR: Without locality, *Hirtz 8414*. Color slide of live flowers. AMO! **Morona-Santiago**; Road Cuenca to Limón via Gualacéo, 2800 m, *Luer 2754*. Color slide of live flowers. AMO!

DISTRIBUTION AND ECOLOGY: Known only from southeastern Ecuador, on the eastern slope of the Andes. Epiphytic, 2400-2900m altitude. Flowering from September to February.

RECOGNITION: *Epidendrum ophiochilum* belongs to the Mancum Group, Cylindraceum Subgroup which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with resupinate flowers and a generally non-reduced, membranaceous lip. The species has (2)3-4 leaves, 1-1.5 cm wide, inflorescence 15-20 cm long, base of sepals, petals and column green, apex reddish brown, lip reddish brown, sepals and petals 5-6 mm long, lateral lobes of the lip narrowly elliptic-lanceolate, apex of midlobe deeply bilobed, lobes bifurcate. It is similar to *Epidendrum cylindrostenophyllum* which has narrower leaves, ca. 1 cm wide, inflorescence 15 cm long, flowers greenish white, smaller sepals and petals, 3.5-5 mm long, lateral lobes of the lip narrow at the base, transversely elliptic at the apex, midlobe dilated, scarcely bilobed, entire. *Epidendrum cylindrostachys* Rchb. f. & Warsc. has a longer inflorescence, larger flowers, the sepals and petals 8-10 mm long, and falcate lateral lobes of the lip. *Epidendrum cylindraceum* Lindl. has wider leaves, 2-3.5 cm wide, longer inflorescence, falcate lateral lobes of the lip, and a smaller midlobe of the lip.

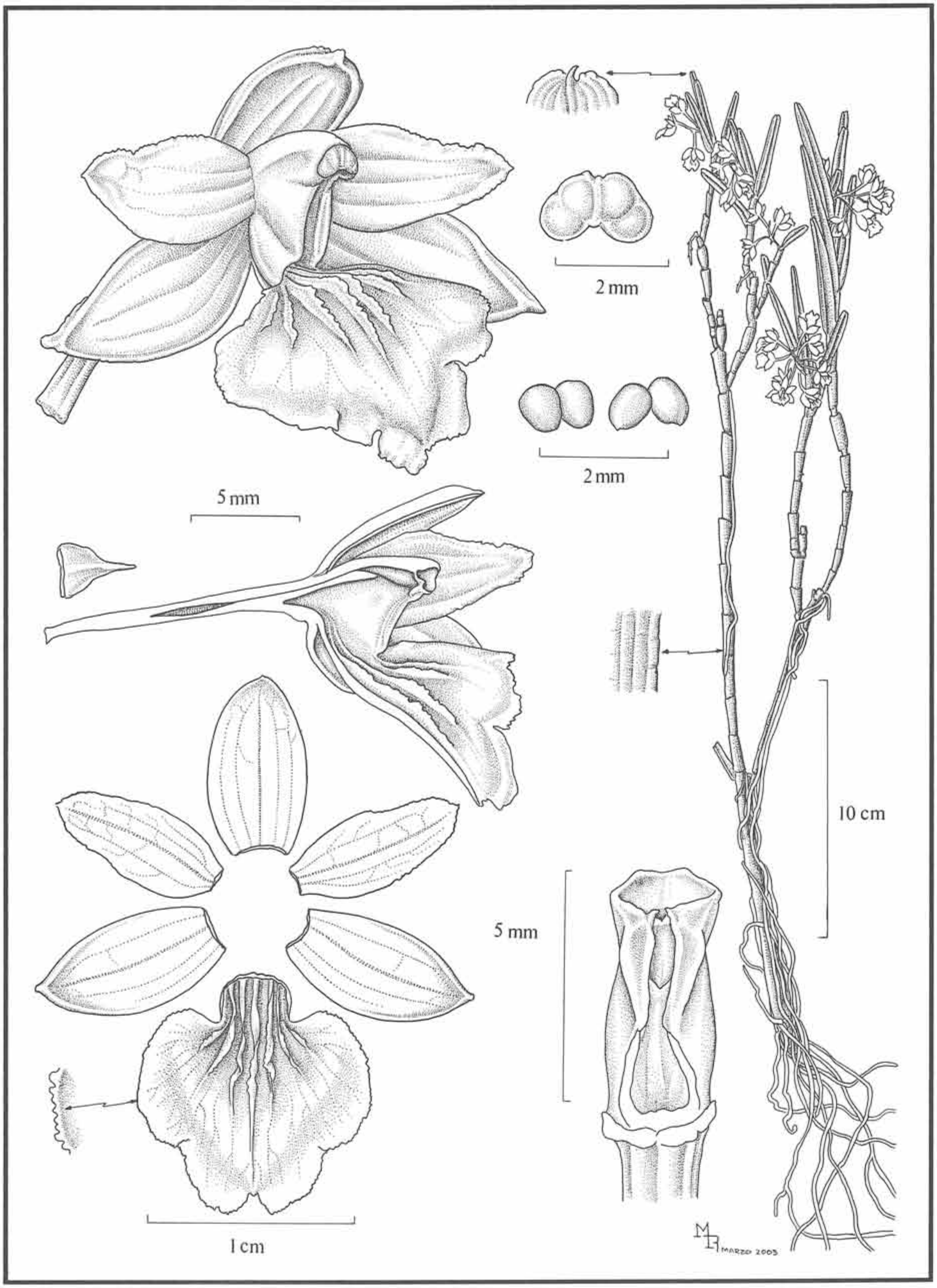


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek οφις- snake, viper-like and χειλος- lip, in reference of the lip which looks like a snake's tongue.

Author: L. Sánchez S. **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM ORTHOPTERUM Hágsater & E. Santiago **Plate 770**

EPIDENDRUM ORTHOPTERUM Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Tolima: Along Quindio Highway, between Cajamarca and summit of Divide, 3200 m, 27 March 1939, ***Ellsworth P. Killip & Guillermo Varela 34572.*** Holotype: AMES! (Illustration voucher). Isotype: US!

Epidendro dolichorhachis Hágsater & Dodson simile sed inflorescentia valde brevi pauciflora, petalis anguste ovatis, labello 7 carinas ferenti, columnae alis rectis differt.

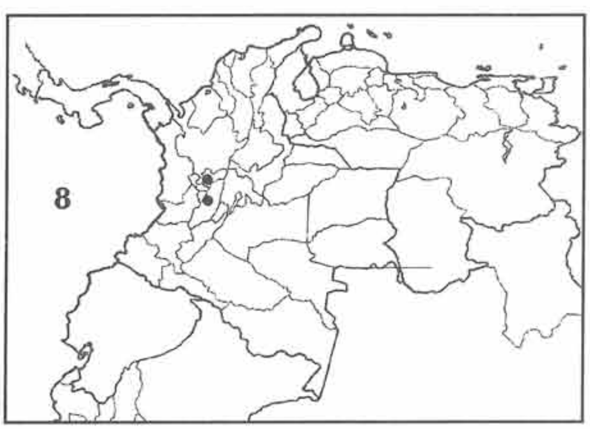
Hierba terrestre, ramificada, 63 cm de alto. **Raíces** abundantes en la base de la planta y muy escasas en la base de algunas ramificaciones inferiores, delgadas, carnosas, blancas, 0.8-1.4 mm de grosor. **Tallos** ramificados de los entrenudos apicales del tallo anterior, tipo caña, teretes, delgados, rectos, el basal de 26 x 0.4 cm, las ramificaciones 4-22 x 0.3-0.45 cm. **Hojas** 5-7, distribuidas hacia la mitad apical de los tallos, erectas, dísticas, coriáceas; vaina tubular, finamente estriada y ligeramente rugosa, 1.1-2.2 x 0.3-0.45 cm; lámina angostamente lanceolada, ápice bilobado a desigualmente bilobado, con una quilla dorsal diminuta, margen entero, las del tallo basal no vistas, las de las ramificaciones apicales, [3]4.5-6.5 x 0.5-0.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, ligeramente arqueada, florece una sola vez, 2 cm de largo, pedúnculo corto, terete, delgado, desprovisto de brácteas, 5 mm de largo, raquis terete, delgado, recto, 1.5 cm de largo. **Brácteas florales** más cortas que el ovario, angostamente triangulares, acuminadas, 2-5 mm de largo. **Ovario** terete, delgado, no inflado, liso, 11-13 mm de largo. **Flores** 10-12, simultáneas, resupinadas, color rosado rojizo, columna verde en el ápice, sin datos de fragancia. **Sépalos** entreabiertos, libres, elípticos, ligeramente cóncavos, ápice subredondeado, 4 nervados, margen entero, lisos, 8.7-9.0 x 4.4-4.8 mm. **Pétalos** entreabiertos, libres, angostamente ovado elípticos, ápice redondeado, 3-nervados, margen diminutamente crenado, 8.5 x 3.8 mm. **Labelo** unido a la columna de manera oblicua, trilobado, cordado en la base, margen eroso, 10 x 11 mm; ecalloso, provisto de 7 quillas erosas, conspicuas, las tres centrales alargadas hasta la parte media del disco, las laterales gradualmente más cortas; lóbulos laterales casi tan grandes como el lóbulo medio, semiorbiculares, 4 x 6.7 mm; lóbulo medio bilobado, emarginado, los lóbulos subelípticos, 3.8 x 7.1 mm. **Columna** unida de manera oblicua al labelo, ligeramente arqueada, dilatada verticalmente hacia el ápice, 6 mm de largo; provista de un par de alas no involutas que forman una cavidad amplia entre la columna y el labelo. **Clinandrio** corto, entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Antera** reniforme, 4 locular. **Polinios** 4, obovoides. **Nectario** poco profundo, apenas penetrando justo detrás del perianto, angosto, en la columna triangular, amplio hacia el ápice, liso. **Cápsula** no vista.

Terrestrial, branching **herb. Roots** abundant at the base of the plant, few at the base of the lower branches, thin, fleshy. **Stems** branching from the apical internodes of the previous stem, cane-like, terete, thin, straight. **Leaves** 5-7, distributed throughout the apical half of the stems, erect, distichous, coriaceous; sheath tubular, minutely striate and slightly rugose; blade narrowly lanceolate, apex bilobed to unequally bilobed, with a minute dorsal keel, margin entire. **Inflorescence** apical, racemose, peduncle erect thin, without bracts, rachis terete, thin, straight. **Floral bracts** shorter than the ovary, narrowly triangular, acuminate. **Ovary** terete, thin, not inflated, smooth. **Flowers** 10-12, simultaneous, resupinate, pinkish red, the apex of the column green. **Sepals** partly spreading, free, elliptic, slightly concave, apex subrounded, 4-veined, margin entire, smooth. **Petals** partly spreading, free, narrowly ovate-elliptic, apex rounded, 3-veined, margin minutely crenate. **Lip** obliquely united to the column, 3-lobed, base cordate, margin erose; ecallose, provided with 7 erose, conspicuous keels, the three central ones elongate, reaching the middle of the disc, laterals gradually shorter; lateral lobes about as large as the midlobe, semiorbicular; midlobe bilobed, emarginate, lobes subelliptic. **Column** obliquely united to the lip, slightly arched, dilated vertically towards the apex, provided with a pair of non involute wings that form a wide cavity between the column and the lip. **Clinandrium hood** short, entire. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid. **Nectary** barely penetrating the ovary, narrow, widened into a broad triangular cavity towards the apex.

OTHER SPECIMENS: COLOMBIA: Caldas: Manizales, 3500 m, 7 IV 1956, *Renz 8593,* RENZ!

DISTRIBUTION AND ECOLOGY: Known only from the Cordillera Central in Central Colombia, south of the Nevado de Tolima, at 3200-3500 m, near the summit of the Divide. Flowering in March and April.

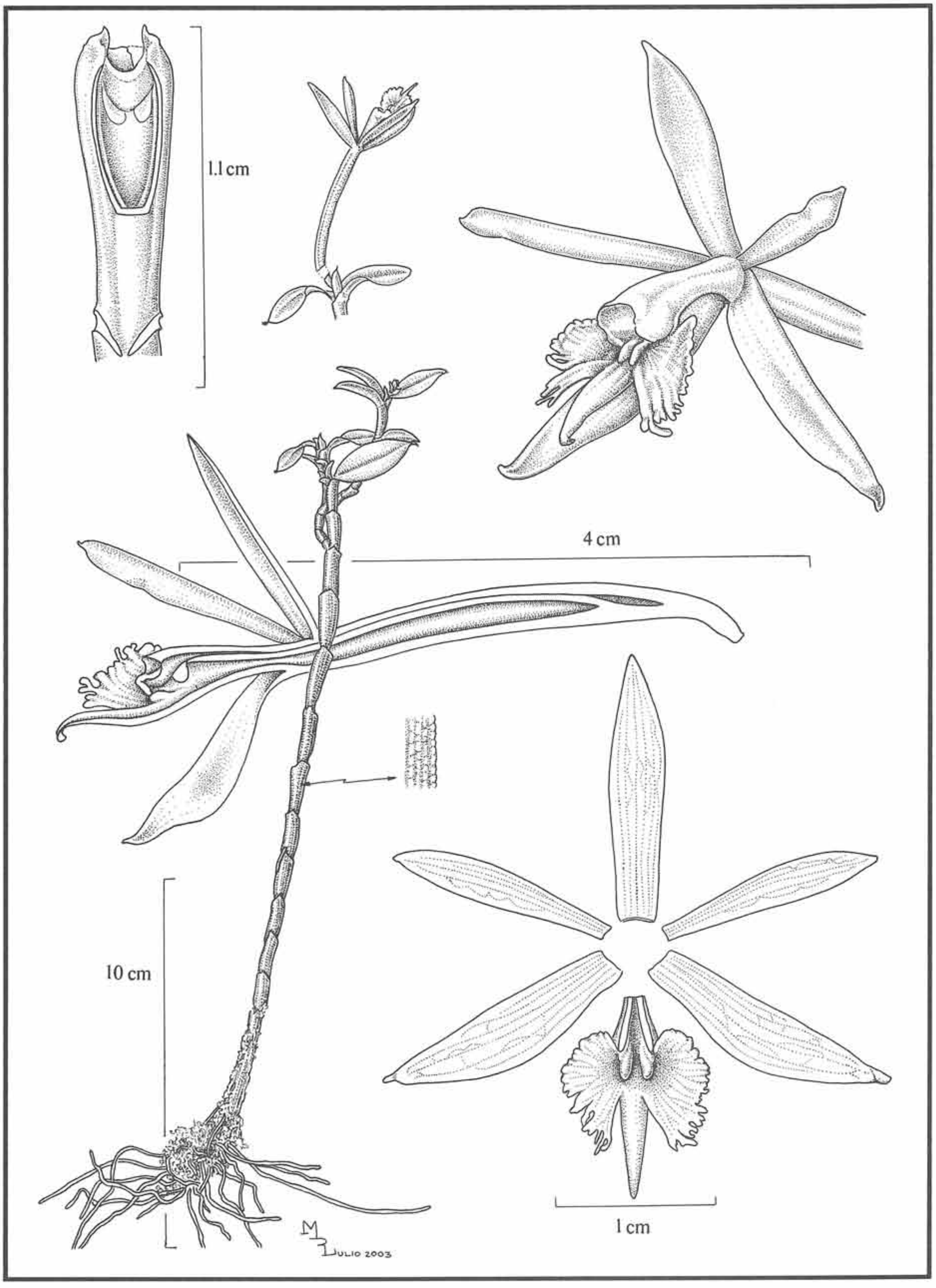
RECOGNITION: *Epidendrum orthopterum* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose with 1-10 thin keels, smooth to erose, the column completely to obliquely united to the lip, the anther reniform. The new species is recognized by the short inflorescence, 2 cm long, with 10-12 flowers, the narrowly ovate, 3-veined petals, 3.8 mm wide, the lip with 7, erose keels and the column with wings at the union of the column and lip straight, i.e. not involute. *Epidendrum dolichorhachis* has a 6-12.5 cm-long inflorescence with 15-30 flowers, oblong petals, 2.3-2.6 mm wide, and the lip with 5, erose, serrulate keels. *Epidendrum yarumalense* Hágsater & E. Santiago has linear oblanceolate, 1-veined petals, 0.7-1.4 mm wide, the lip has 4-5 very low, inconspicuous keels. *Epidendrum lloense* (Lindl.) Hágsater & Dodson has a 5-12 cm-long inflorescence, narrowly ovate to subtrullate, 4-5-veined petals, [4] 6.0-6.6 mm wide, 5 low keels on the lip forming a convex disc and a very prominent and involute column foot. *Epidendrum gratissimum* (Rchb. f.) Hágsater & Dodson has ovate petals, and the subreniform, apically 4-lobed lip, with 3-5, laminar, erose keels.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek ορθος- straight, upright, and πτερν- wing, in reference to the straight wings of the column, which are not involute at the apex as in most other species of this group.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM OXYBATESII Hágsater & Dodson Plate 771

EPIDENDRUM OXYBATESII Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Imbabura: Along road from Ibarra to Lita in the region of Guallupe, 600-1300 m, November 1988, ***Alex Hirtz 3905.*** Holotype: MO! (Illustration voucher).

Epidendro batesii Dodson simile sed floribus viridi-luteolis concoloribus, tepalis acuminatis, labelli lobulis lateralibus in junctionis puncto angustioribus et profundiore laciniatis, labelli lobulo medio aciculari discrepans.

Hierba epífita, ramificada, de 23 cm de alto. **Raíces** basales, carnosas, delgadas, abundantes, 0.3-0.8 mm de grosor. **Tallos** ramificados cerca del ápice, tipo caña, teretes, erectos, 23 x 0.35 cm; las ramificaciones muy cortas, 3.5-4 x 0.23-0.4 cm. **Hojas** distribuidas a lo largo del tallo principal caedizas, 1 persistente en el ápice, 2-3 en las ramificaciones, distribuidas en la mitad apical de los tallos, subcoriáceas, alternas; vaina tubular, estriada y verrugosa, 8-15 x 2.3-4 mm; lámina angostamente elíptica, ápice subagudo, margen entero, lisa; las del tallo principal 2.7 x 1.0 cm; las de las ramificaciones 1.5-1.8 x 6-7 mm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, subsésil, 0.5 cm de largo; pedúnculo ausente; raquis oculto totalmente por las brácteas florales. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 4 mm de largo. **Flores** 2, sucesivas, verde amarillento, concoloras; sin datos de fragancia. **Ovario** terete, delgado, liso, 28 mm de largo. **Sépalos** extendidos, libres, angostamente oblanceolados, acuminados, 6-nervados, margen entero, no ornamentados, 16 x 3.6 mm; los **laterales** oblicuos, aristados. **Pétalos** extendidos, libres, oblanceolados, agudos, 3-nervados, las nervaduras laterales ramificadas hacia la parte media apical de manera que parecen 5 nervados, margen entero, 14 x 2.4 mm. **Labelo** unido a la columna, profundamente trilobado, cordado en la base, 10.6 x 9.3 mm; bicalloso, los callos prominentes, delgados; desprovisto de carinas; lóbulos laterales oblicuamente semiovados, dolabriformes, margen crenado en la base, laciniado hacia el ápice, 3.6 x 7.5 mm; lóbulo medio acicular, margen entero, 6.3 x 1.8 mm. **Columna** ligeramente arqueada, obcónica, el ápice muy carnoso, 12 mm de largo. **Clinandrio** corto, margen entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de ½ del largo de la cavidad estigmática. **Nectario** penetrando ¾ del ovario, no inflado, liso. **Cápsula** no vista.

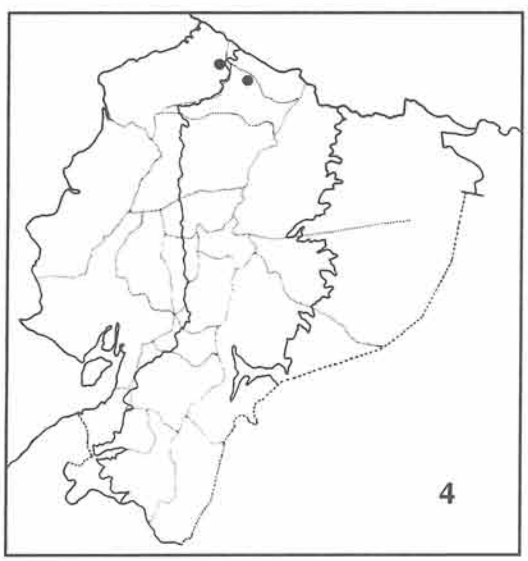
Epiphytic, branching **herb. Roots** basal, fleshy, thin. **Stems** branching near the apex, cane-like, terete, erect; the branchès very short. **Leaves** of the main stem deciduous, only one persistent at the apex, 2-3 on the branches, distributed throughout the apical half of the stem, subcoriaceous; sheaths tubular, striated, verrucose; blade narrowly elliptic, subacute, margin entire, smooth, unequal, those of the main stem larger. **Inflorescence** apical, racemose, subsessile, rachis totally hidden by the floral bracts. **Floral bracts** much shorter than the ovary, triangular, acute. **Flowers** 2, successive, yellowish green, concolor. **Ovary** terete, thin, smooth. **Sepals** spreading, free, narrowly oblanceolate, acuminate, 6-veined, margin entire, the laterals oblique, aristate. **Petals** spreading free, oblanceolate, acute, 3-veined, the lateral veins branching in the middle so as to appear 5-veined, margin entire. **Lip** united to the column, deeply 3-lobed, cordate; bicallose, the calli prominent, thin, without keels; lateral lobes obliquely semiovate, dolabriform, margin crenate below, laciniate towards the apex; midlobe acicular, acute, margin entire. **Column** slightly arching, obconical, apex very fleshy. **Clinandrium hood** short, margin entire. **Rostellum** apical, slit. **Nectary** penetrating 3/4 of the ovary, not inflated, smooth.

OTHER SPECIMENS: ECUADOR: Esmeraldas: Lita to Alto Tambo, km 12, 800 m, 20 V 1987, *Dodson 17179*, MO! km 13-15 Lita to San Lorenzo, 720-850 m, 13 V *1990, Dodson 18287*, MO! NW of Cristal, 10 km NW of Lita, 1450 m, 29 XII 1990, *Dodson 18618A*, MO! **Imbabura**: Ibarra to San Lorenzo, Cachaco to Santa Rosa de Cachaco, 1500 m, 16 III 1991, *Hirtz 5251*, QCNE!

OTHER RECORDS: ECUADOR: Imbabura: Ibarra to San Lorenzo, Cachaco to Santa Rosa de Cachaco, 1500 m, 16 III 1991, *Hirtz 5251*, AMO (color slide)!

DISTRIBUTION AND ECOLOGY: Known only from northern Ecuador, on the western slopes of the Andes, around Lita, at around 600-1500 m altitude. Flowering in December to May. This species seems to grow at slightly higher altitudes than *E. batesii* Dodson.

RECOGNITION: *Epidendrum oxybatesii* belongs to the Cardiophyllum Group, Batesii Subgroup, which is characterized by the main stem with a subapical branching habit, acute leaves, successive flowers, opening one at a time, deep nectary, entire to 3-lobed lip with the lateral lobes more or less fimbriate to erose. The new species is distinguished by the pale, yellowish green, concolor flowers, acuminate tepals, 3-veined petals, deeply 3-lobed lip with the semiovate, dolabriform, lateral lobes narrower at the junction, crenate to laciniate margin, and the acicular midlobe. It is similar to *Epidendrum batesii* which has yellow to pinkish tepals with a white lip, less deeply 3-lobed lip with the midlobe short and truncate. *Epidendrum acrobatesii* Hágsater & Dodson has smaller flowers, the sepals 11-12 mm long, narrower, linear-oblanceolate, 1-veined petals and a truncate, obcuneate midlobe. *Epidendrum silverstonei* Hágsater has oblanceolate, rounded, 3-veined petals and an entire, suborbicular, deeply cordate lip. *Epidendrum farallonense* Hágsater has smaller flowers, and a large, rectangular, truncate midlobe of the lip. *Epidendrum laceratum* C. Schweinf. has narrow, linear-elliptic leaves, small flowers, 5.5-6 mm long sepals, linear-elliptic, 3-veined petals and an entire, deeply lacerate lip with an entire, triangular-ovate, obtuse apex. *Epidendrum cardiobatesii* Hágsater & Dodson has oblong, subrounded leaves, 15-16 mm-long sepals, linear-elliptic, 3-veined petals and a deeply heart-shaped, apiculate lip.

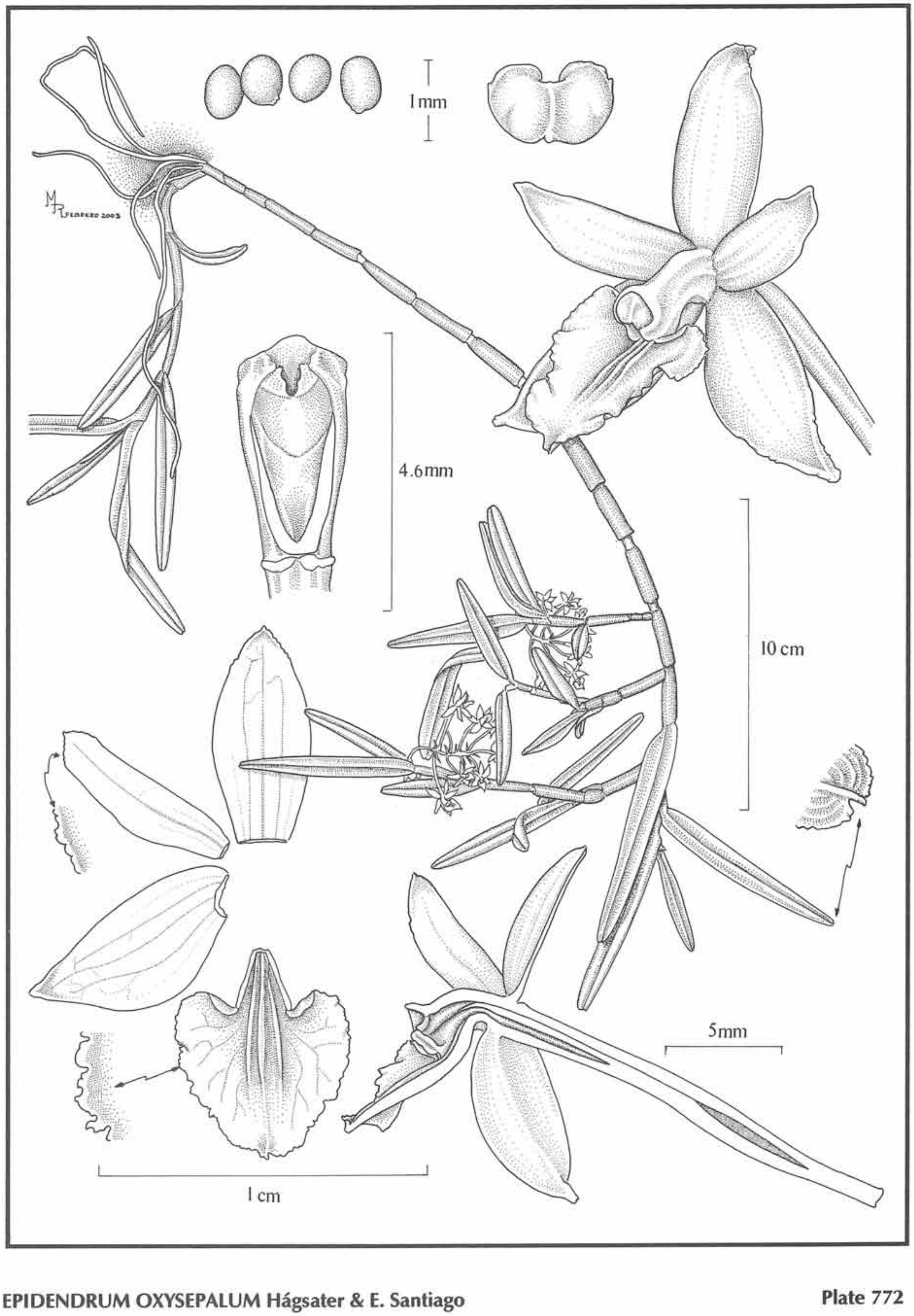


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek οξυς- sharp, and Bates, in reference to the acicular, pointed midlobe of this species which distinguishes it from *Epidendrum batesii*. Will L. Bates of Corpus Christi, Texas, has supported orchid work for many years, was a member of the Board of Trustees of the American Orchid Society and maintained a marvelous collection of orchid species and hybrids. He participated, with the second author, in the collection of the type of *Epidendrum batesii*.

Authors: E. Hágsater & C. H. Dodson **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM OXYSEPALUM Hágsater & E. Santiago

Plate 772

EPIDENDRUM OXYSEPALUM Hágsater *et* E. Santiago, *sp. nov.*

Type: VENEZUELA: Táchira: between La Grita and Pregonero, 3200 m, epiphitic, 9 October 1965, ***Luciano Bernardi 10964.*** Holotype: G! (Illustration voucher).

Epidendro restrepoano A. D. Hawkes simile sed segmentis floralibus acutis, floribus brunneo-luteolis usque ad purpureo-roseis pallidis, sepalis extus laevibus, sepalo dorsali duplo longiore quam latiore, petalis oblongis, labello subcordiformi 3-5 carinas ferenti, columna omnino cum labello connata divergens.

Hierba epífita o terrestre, ramificada, 20-45 cm de alto. **Raíces** de la base del tallo basal, escasas en algunas ramificaciones, gruesas, 0.5-1.7 mm de grosor. **Tallos** ramificados, rectos, tipo caña, teretes, delgados, los nuevos tallos producidos de cerca del ápice del tallo anterior; el basal de 15-32 x 0.35-0.45 cm; los subsecuentes, 2.5-12.5 x 0.2-0.4 cm. **Hojas** 10-15 en el tallo basal, distribuidas en los 2/3 apicales del tallo, caedizas, generalmente 3 persistentes en el ápice del mismo; 3-6 en las ramificaciones, distribuidas en la mitad apical, alternas, subcoriáceas; vaina tubular, estriada, rugosa, 8-24 x 2-4.5 mm; lámina lanceolada, ápice desigualmente bilobado, con una quilla dorsal baja, margen entero a ligeramente crenado hacia el ápice; las del tallo basal 4-8.5 x 0.6-1.1 cm; las de los tallos superiores 2.3-7.8 x 0.4-0.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueado nutante, florece una sola vez, 1.5-2.5 cm de largo; pedúnculo corto, terete, delgado, desprovisto de brácteas; raquis terete, delgado, recto. **Brácteas florales** de menos de la mitad del largo del ovario, las apicales gradualmente más pequeñas, linear lanceoladas, acuminadas, 3-6 mm de largo. **Flores** 5-11, simultáneas, resupinadas, pardo amarillentas a púrpura rosado pálido, sin datos de fragancia. **Ovario** terete, delgado, liso, no inflado, 11-17 mm de largo. **Sépalos** extendidos, libres, elípticos, agudos, lisos, 5-nervados, las nervaduras laterales más cortas, 6-8 x 2.8-4 mm; el **dorsal** con el margen apical entero a ligeramente denticulado; los **laterales** oblicuos, margen entero. **Pétalos** extendidos, libres, oblongos, agudos, ligeramente oblicuos, margen apical entero a crenado, 3-nervado, el par lateral ligeramente más corto, 5.6-6.3 x 1.5-1.7 mm. **Labelo** unido a la columna, entero, subcordiforme, base cordada, ápice apiculado, margen eroso dentado, 5-6 x 5-5.4 mm; ecalloso, disco provisto de 3-5 quillas lisas, las 3 centrales alargadas casi hasta la parte media del labelo. **Columna** corta, gruesa, arqueada, ventralmente provista de un par de alas gradualmente más anchas de la base hacia el ápice de la columna, muy carnosas y truncadas en el ápice, no involutas, 3.8-4.4 mm de largo. **Clinandrio** en forma de embudo, corto, margen entero. **Antera** reniforme, con una quilla roma al frente, 4-locular. **Polinios** 4, ovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** penetrando de 1/2 a 1/3 del ovario, delgado, no inflado, liso. **Cápsula** globosa, pedicelo 6 mm de largo, cuerpo 16-19 x 14- mm, cuello apical 4-6 mm de largo.

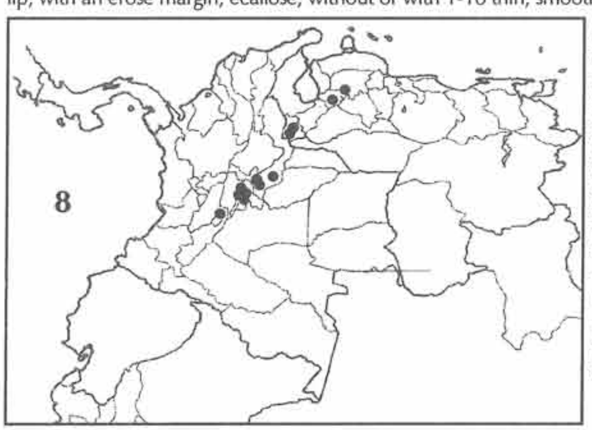
Epiphytic or terrestrial, branching, erect **herb. Roots** basal, thin. **Stems** cane-like, terete, straight, produced from near the apex of the previous stem. **Leaves** distributed throughout the apical two thirds of the stems, subcoriaceous; sheath tubular, minutely striated and somewhat rugose when dry; blade lanceolate, apex unequally bilobed, margin entire to slightly crenate towards the apex. **Inflorescence** apical, flowering only once, racemose, arching-nutant, short. **Floral bracts** half as long as the ovary or less, linear-lanceolate, acuminate. **Flowers** 5-11, resupinate, simultaneous, brown.yellowish to pale purple-pink. **Ovary** terete, thin, smooth. **Sepals** spreading, free, fleshy, smooth, 5-veined, margin entire, elliptic, acute. **Petals** spreading, free, oblong, acute, fleshy, oblique, 3-veined, margin entire to crenate. **Lip** united to the column, entire, subcordiform, apex apiculate, margin minutely erose-dentate; ecallose, provided with 3-5 low, smooth, keels, the 3 central ones subequal, reaching the middle of the lip. **Column** dorsally arched, short, thick, ventrally provided with a pair of rounded, truncate, non involute wings. **Clinandrium hood** short, entire. **Anther** reniform, with a low keel in front, 4-celled. **Pollinia** 4, ovoid. **Nectary** penetrating 1/2 to 1/3 of the ovary, narrow, smooth.

OTHER SPECIMENS: COLOMBIA: Boyaca: Sierra Nevada del Cocuy, 3250 m, 11 IX 1957, *Grubb 817,* COL! K! US! Arcabuco-Villa de Leyva, 3500 m, 31 VIII 1967, *Jaramillo 3145,* COL! Tunjá-Arcabuco, 3250 m, 17 X 1967, Ibid. *3699,* COL! **Cundinamarca:** Bogotá, Quebrada del Rosal, 3200 m, 29 VI 1939, *Cuatrecasas 5714,* COL! F! (Illustration at AMO!) US! Bogotá, 2750 m, 7 VIII 1916, *Dawe 143,* K! Choachí-La Calera, 2700 m, 28 II 1974, *Forero 939,* COL! Guasca, 3000 m, 11 X 1939, *García Barriga 8096,* COL! US! Chocontá, 2700-2900 m, 14 I 1962, *García Barriga 17382,* COL! Guasca-Gachetá, 3000 m, 6 IX 1968, *Ortiz Valdivieso 140,* HPUJ!, Illustration HPUJ!, xerox AMO! Santa Rosa de Viterbo, 2800 m, Ibid. *140A,* HPUJ! Guasca, 3 XI 1956, *Ospina 20,* AMES! COL! Berge nordlich von Bogotá, 3100-3200 m, 20 VII 1941, *Renz 3960,* RENZ! Quebrada de Chicó, 2800 m, 4 XI 1943, *Schneider 139* [Martin Schneider used this number to identify a species, not an individual collection], AMES 109292! Usaquén, 3000 m, 6 VI 1948, *Schneider 139,* S! Páramo de Chipaque, 3100 m, 25 IX 1941, *Schultes 1044,* AMES x2! **Tolima:** *Linden s.n.,* W 42444! **VENEZUELA: Lara:** Moran: Humocaro to Buenos Aires , 2285-3290 m, 25 VI 1979, *Liesner 7960,* MO! **Táchira:** Páramo de la Negra-Pregonero, 2700-2900 m, 29 VIII 1966, *Steyermark 96883,* AMES! K! **Trujillo:** Guirigay-Peña Blanca, 3200 m, VIII 1958, *Aristiguieta 3618,* NY! US!

OTHER RECORDS: COLOMBIA: As *Epidendrum restrepoanum, Mutis 38,* **Flora Real Expedición Bot. Nuevo Reyno Granada**, 9(3): pl. 38, 1985. **VENEZUELA: Táchira**: Tamá, 2800 m, 1 VI 1967, *Dunsterville 72,* illustration, in Romero & Carnevali, 2000, **Orchids of Venezuela, An Illustrated Field Guide, 2nd Ed.** Armitano Editores, Caracas, vol. A-G, plate 243, as *E. gastropodium* Rchb. f. [Scale of sepals and petals is too large.] Foldats, E., Flora de Venezuela, Orchidaceae, vol. 15 (3): 265, Fig. 475, as *E. globiflorum*, [except for inserted lip with 5 mm scale; description is a combination of *E. oxysepalum* and *E. restrepoanum*.] Junín: La Sabana, 2924 m, *Fernández*, photo, AMO!

DISTRIBUTION AND ECOLOGY: Growing on the Andes from Bogotá, Colombia to Venezuela (Trujillo), epiphytic or terrestrial in wet cloud forest at around 2700-3500 m altitude. Flowering from June to February.

RECOGNITION: *Epidendrum oxysepalum* belongs to the Diothonea Group and Subgroup characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, entire to 3-lobed lip, with an erose margin, ecallose, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally or obliquely to free, and the reniform anther. This new species is recognized by the simultaneous, small, brown-yellowish to purple-pink flowers on a short, compact inflorescence, an arching column, acute tepals, and an entire, straight, cordiform lip with 3-5 keels on the disc of the lip. It is similar to *Epidendrum restrepoanum* which grows in the same general area and has red flowers with a yellow lip and column, externally warty, pustulate sepals, an arching, nearly completely free column, deeply cordate, three-lobed lip, shallowly emarginate and 5-7 keeled, and the dorsal sepal nearly as wide as it is long and round. *Epidendrum dolichorhachis* Hágsater & Dodson, has an elongate, many-flowered inflorescence (6-12.5 cm long), slightly sigmoid column with a pair of short, involute, ventral wings, and a 3-lobed lip with 5 serrulate keels.

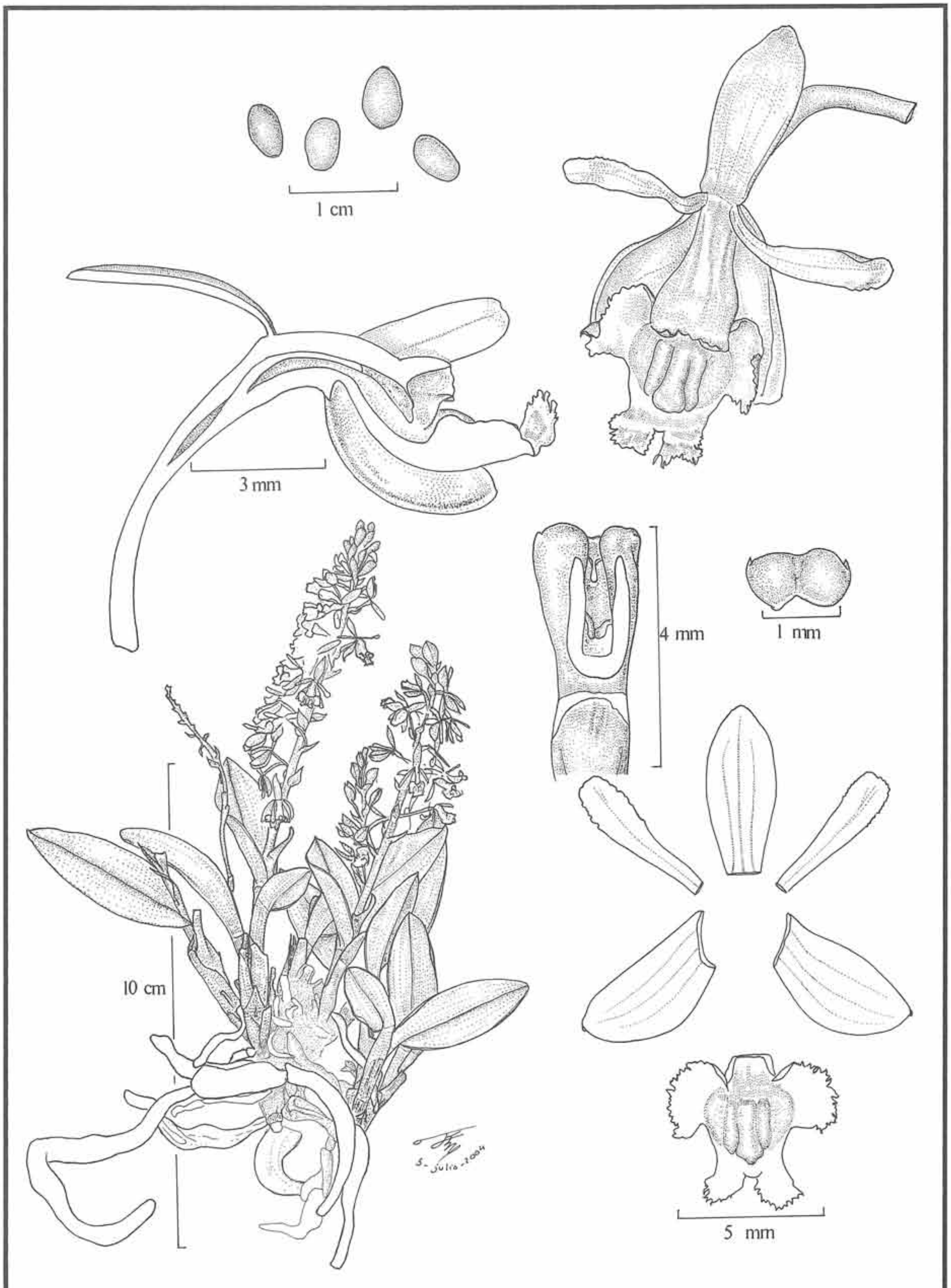


CONSERVATION STATUS: DD. Data deficient. Apparently common.

ETYMOLOGY: From the Greek οξυς- sharp, and *sepalum*, in reference to the appearance of the flowers, with acute sepals, especially in comparison with *E. restrepoanum*.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM PACHYDISCUM Hágsater

Plate 773

EPIDENDRUM PACHYDISCUM Hágaster, *sp. nov.*

Type: PERU: Piura: west of Huancabamba, 2800 m, 17 August 1980, ***Carlyle & Jane Luer & W. & H. Koeniger 5397.*** Holotype: SEL! (Illustration voucher).

Epidendro rupestri Lindl. simile sed omnino minus, inflorescentia dense multiflora, labelli lobulo medio leviter longiore quam latiore, profunde bifido, lobis leviter divergentibus recedit.

Hierba epífita, simpodial, erecta, 12.5 cm de alto. **Raíces** basales, carnosas, muy gruesas, blancas, 1.6-5 mm de grosor. **Tallos** sencillos, formando seudobulbos fusiformes cortos, 2.0-2.5 x 0.24-0.3 cm; cubiertos parcialmente por 1 a 2 vainas tubulares, agudas, fibrosas con el tiempo, 1.5-2.0 cm de largo. **Hojas** 2, una apical en el tallo, la 2ª de una vaina foliácea, la lámina articulada, ambas se encuentran a la altura del ápice de los tallos, suberectas; láminas angostamente elíptica, aguda, con una quilla dorsal diminuta, coriácea, margen entero, desiguales, la de la vaina menor 1.3-4.1 x 0.7-1.2 cm. **Bráctea spatácea** ausente. **Inflorescencia** apical, racemosa, erecta, multiflora, densa, 4.5-9.2 cm de largo; pedúnculo corto, delgado, lateralmente aplanado, no ornamentado, 1.1-1.8 cm de largo; provisto en la parte media de una bráctea angostamente triangular, aguda, abrazadora, 6-7 mm de largo. **Brácteas florales** de la mitad del largo del ovario, triangulares, agudas, abrazadoras, 3-5 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 6-8 mm de largo. **Flores** 30-38, la mayoría abiertas de manera simultánea, unas cuantas apicales presentes aún en botón floral, resupinadas, color amarillo, el labelo amarillo más intenso; sin datos de fragancia. **Sépalos** libres, redondeados, 3-nervados, lisos, margen entero, 5.3-5.8 x 2.4-2.5 mm; el **dorsal** reflexo, angostamente obovado; los **laterales** entreabiertos, elíptico obovados, diminutamente apiculados, oblicuos. **Pétalos** extendidos, libres, linear oblanceolados, redondeado truncados, 1-nervados, margen eroso en la mitad apical y entero en la mitad basal, 4.7 x 0.7 mm. **Labelo** unido a la columna, trilobado, base cordada, 5 x 5.8 mm; ecalloso, disco con una plataforma transversalmente elíptica, carnosa, con tres quillas centrales bien definidas, el par lateral ligeramente más corto que la quilla central; lóbulos laterales dolabriformes, margen dentado fimbriado, 2 x 2.5 mm; lóbulo medio profundamente bífido, formando dos lóbulos algo divergentes, subrectangulares, oblicuos, el márgen exterior curveado y entero, el margen interior dentado a cortamente fimbriado, seno anchamente mucronado, 2.7 x 3.4 mm. **Columna** arqueada, gruesa, 4 mm de largo. **Clinandrio** prominente, corto, en forma de embudo, margen crenado. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** corto, penetrando el ovario justo detrás del perianto, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, erect **herb. Roots** basal, very thick, white. **Stems** simple, forming short, fusiform pseudobulbs, partly covered by 1-2 tubular, acute sheaths, becoming fibrous with time. **Leaves** 2, one apical on the stem, the 2nd one from a foliaceous sheath, the blade articulate, both at the height of the apex of the stem, suberect; blades narrowly elliptic, acute, with a low dorsal keel, coriaceous, margin entire, unequal, that of the sheath smaller. **Inflorescence** apical, racemose, erect, many-flowered, dense; peduncle short, thin, laterally flattened; provided at the middle with a narrowly triangular bract, acute. **Floral bracts** half the length of the ovary, triangular, acute. **Ovary** terete, thin, smooth. **Flowers** 30-38, most of them open simultaneously, a few apical buds still closed, resupinate, yellow, the lip darker. **Sepals** free, rounded, 3-veined, smooth, margin entire; the **dorsal** reflexed, narrowly obovate; the **laterals** partly spreading, elliptic-obovate, minutely apiculate, oblique. **Petals** spreading, free, linear-oblanceolate, truncate-rounded, 1-veined, the apical margin erose, the basal half entire. **Lip** united to the column, 3-lobed, base cordate, ecallose, disc with a transverselly elliptic, fleshy platform, with 3 well-defined, central keels, the lateral pair somewhat shorter than the central keel; lateral lobes dolabriform, margin dentate-fimbriate; midlobe deeply bifid, the lobes somewhat divergent, subrectangular, oblique, the outer margin curved and entire, the inner margin dentate to short-fimbriate, sinus widely mucronate. **Column** arching, thick. **Clinandrium hood** prominent, short, funnel-like, margin crenate. **Anther** reniform, 4-celled. **Nectary** short, barely penetrating the ovary, thin, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from northern Peru, growing epiphytic on trees along a dry quebrada, at 2800 m altitude. Flowering in August.

RECOGNITION: *Epidendrum pachydiscum* belongs to the Rupestre Group which is characterized by the caespitose, sympodial plant, the pseudobulbous stems with 1-4 fully developed leaves toward the apex, and lack of spathes at the base of an erect, racemose or paniculate inflorescence, the lip ecallose but with several fleshy thickened keels on the disc. The species is recognized by the elliptic leaves 7-12 mm wide, the erect, many-flowered raceme of small flowers (sepals 5.3-5.8 mm long), and the deeply 3-lobed lip, ecallose with a fleshy, 3-keeled disc, and the midlobe bilobed, the outer sides curved outwards and entire, the inner sides dentate to short fimbriate, the lobes about as long as they are wide. *Epidendrum rupestre* has a loosely racemose inflorescence, larger flowers (sepals 7 mm long), and the midlobe of the lip subquadrate-rounded, broader than long.

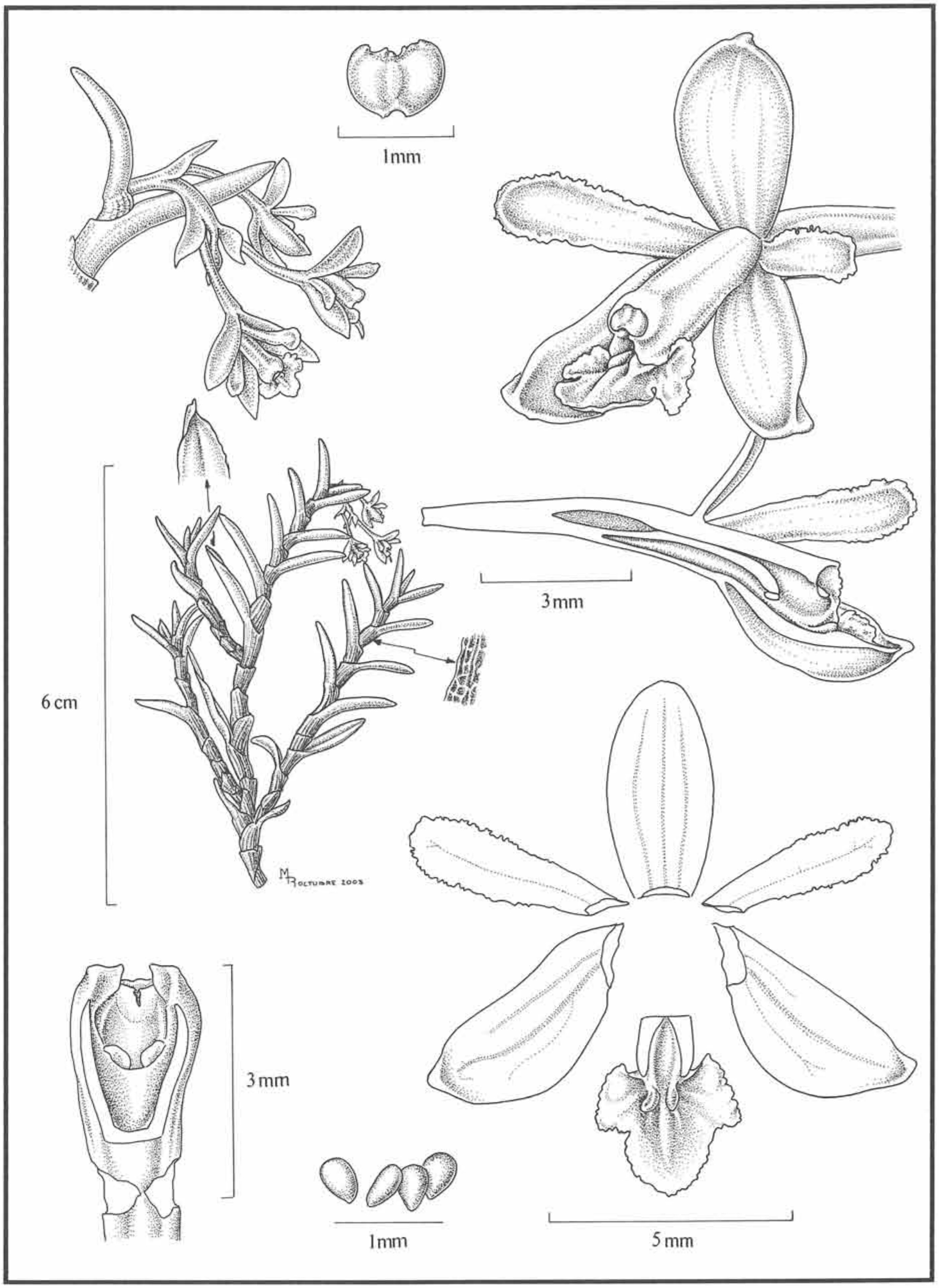


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek παχυς- thick, and δυσκυον- disk, in reference to the thickened disc of the lip.

Author: E. Hágsater **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM PACHYPHYLLOIDES Hágsater & E. Santiago Plate 774

EPIDENDRUM PACHYPHYLLOIDES Hágsater et E. Santiago, *sp. nov.*

Type: COLOMBIA: Cauca: Mt. Pan de Azucar, 3300-3600 m, 16 June 1922, ***Francis W. Pennell 7026***, pro parte. Holotype: AMES! (Illustration voucher, the small plant). [The larger plant on the same sheet is a small specimen of *E. angustissimum* Lindl.].

Epidendro angustissimo Lindl. simile sed valde minus, foliis brevibus, labelli lobulis lateralibus rectangulari-dolabriformibus discrepans.

Hierba epífita, erecta, cespitosa, ramificada, de 4.5-6 cm de alto. **Raíces** en la base de la planta, carnosas, delgadas, blancas, 0.5-0.9 mm de grosor. **Tallos** tipo caña, teretes, muy delgados, erectos, ligeramente flexuosos, ramificados, 5 x 0.14 cm, las ramificaciones a su vez produciendo ramificaciones cortas a lo largo de las mismas, 1-2 x 0.1-0.12 cm. **Hojas** distribuidas a todo lo largo de los tallos, alternas, conduplicadas, coriáceas; vaina tubular adpresa, estriada y rugosa, 2-4 x 1-1.4 mm; lámina angostamente lanceolada, ápice subagudo, margen apical ligeramente irregular, con una quilla dorsal, 0.6-1.1 x 0.2-0.3 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, corta, racemosa, arqueado nutante, pauciflora, 1.1 cm de largo, incluyendo las flores; pedúnculo muy corto, terete, delgado, 1.6 mm de largo, desprovisto de brácteas; raquis terete, delgado, recto, 2.5 mm de largo. **Flores** 3-4, resupinadas, simultáneas, de color amarillo; sin datos de fragancia. **Brácteas florales** más cortas que el ovario, ovadas, agudas, abrazadoras, 2.7 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 3.3-5.5 mm de largo. **Sépalos** extendidos, libres, angostamente elípticos, redondeados, con una quilla dorsal diminuta, margen entero, 4.3-4.9 x 2.1-22 mm; el **dorsal** 3-nervado; los **laterales** 2-nervados, oblicuos. **Pétalos** extendidos, libres, linear oblanceolados, redondeados, 1-nervados, margen profundamente eroso, 4.1-4.6 x 1.1-1.3 mm. **Labelo** unido a la columna, trilobado, base cordada, margen eroso crenado, 2.8 x 3.9 mm; bicalloso, los callos delgados, terminados en 2 quillas cortas, delgadas y bajas, mucho más cortas que la quilla central, intercallosa, prominente, subaguda, lisa, que se desvanece antes de llegar al seno apical; lóbulos laterales dolabriforme rectangulares, 0.81 x 1.3 mm; lóbulo medio semiorbicular, redondeado, 1.3 x 1.7 mm. **Columna** recta, delgada, 3 mm de largo. **Clinandrio** corto, margen ligeramente irregular. **Antera** reniforme, 4 locular. **Polinios** 4, obovoides, lateralmente comprimidos. **Rostelo** apical, hendido. **Nectario** penetrando 1/3 del ovario, liso, no inflado. **Cápsula** no vista.

Epiphytic, erect, caespitose, branching **herb. Roots** from the base of the plant, thin, fleshy. **Stems** cane-like, very thin, erect, slightly flexuous, branching, the branches in turn also branched. **Leaves** distributed throughout the stems, conduplicate, coriaceous; sheath tubular, appressed, striated and rugose; blade narrowly lanceolate, apex subacute, apical margin slightly irregular, with a dorsal keel. **Inflorescence** apical, short, racemose, arching-nutant, few-flowered, short; peduncle very short, terete, thin, rachis terete, thin. **Flowers** 3-4, resupinate, simultaneous, yellow. **Floral bracts** shorter than the ovary, ovate, acute. **Ovary** terete, thin, smooth. **Sepals** spreading, free, narrowly elliptic, rounded, with a minute dorsal keel, margin entire, the **dorsal** 3-veined, the **laterals** 2-veined, oblique. **Petals** spreading, free, linear-oblanceolate, rounded, 1-veined, margin deeply erose. **Lip** united to the column, base cordate, margin erose-crenate; bicallose, the calli thin, prolonged in two short, thin, low keels, with a longer central keel; lateral lobes rectangular-dolabriform; midlobe semi-orbicular, rounded. **Column** straight, thin. **Clinandrium hood** short, margin somewhat irregular. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** apical, slit. **Lóbulos laterales del estigma** pequeños, de 1/4 del largo de la cavidad estigmática. **Nectary** penetrating 1/3 of the ovary, smooth.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from southern Colombia, from high altitude shrub-zone, "paramillo", epiphytic, at 3300-3600 m altitude. Flowering in June.

RECOGNITION: *Epidendrum pachyphylloides* belongs to the Scabrum Group, Cuniculatum Subgroup, characterized by the monopodial, cane-like stems with subapical branching, appressed leaf-sheaths, acute leaves, the small flowers and the 3-lobed lip. The species is recognized by the very small plants, up to 6 cm tall, the short, fleshy, conduplicate, lanceolate leaves, and the nodding inflorescence with small, yellow flowers, the sepals 4.3-4.9 mm long, the oblanceolate petals with the margin very erose, and the 3-lobed lip, with the lateral lobes rectangular-dolabriform and the midlobe semiorbicular. It is sympatric and somewhat similar to the much larger *Epidendrum angustissimum* which has long and very narrow leaves, (30-100 x 1-4 mm), lip with semiobricular lateral lobes and serrulate margins, and sepals 5.0-6.7 mm long. *Epidendrum tenuicaule* Lindl. has clearly wider leaves (3.5-10 mm wide), the small, arching inflorescence with greenish yellow, simultaneous flowers, the lateral lobes of the lip dolabriform. *Epidendrum cuniculatum* Schltr. has a deep nectary, a large clinandrium with the margin sinuous, and very short, reniform, lateral lobes of the lip, with a sinuous margin.

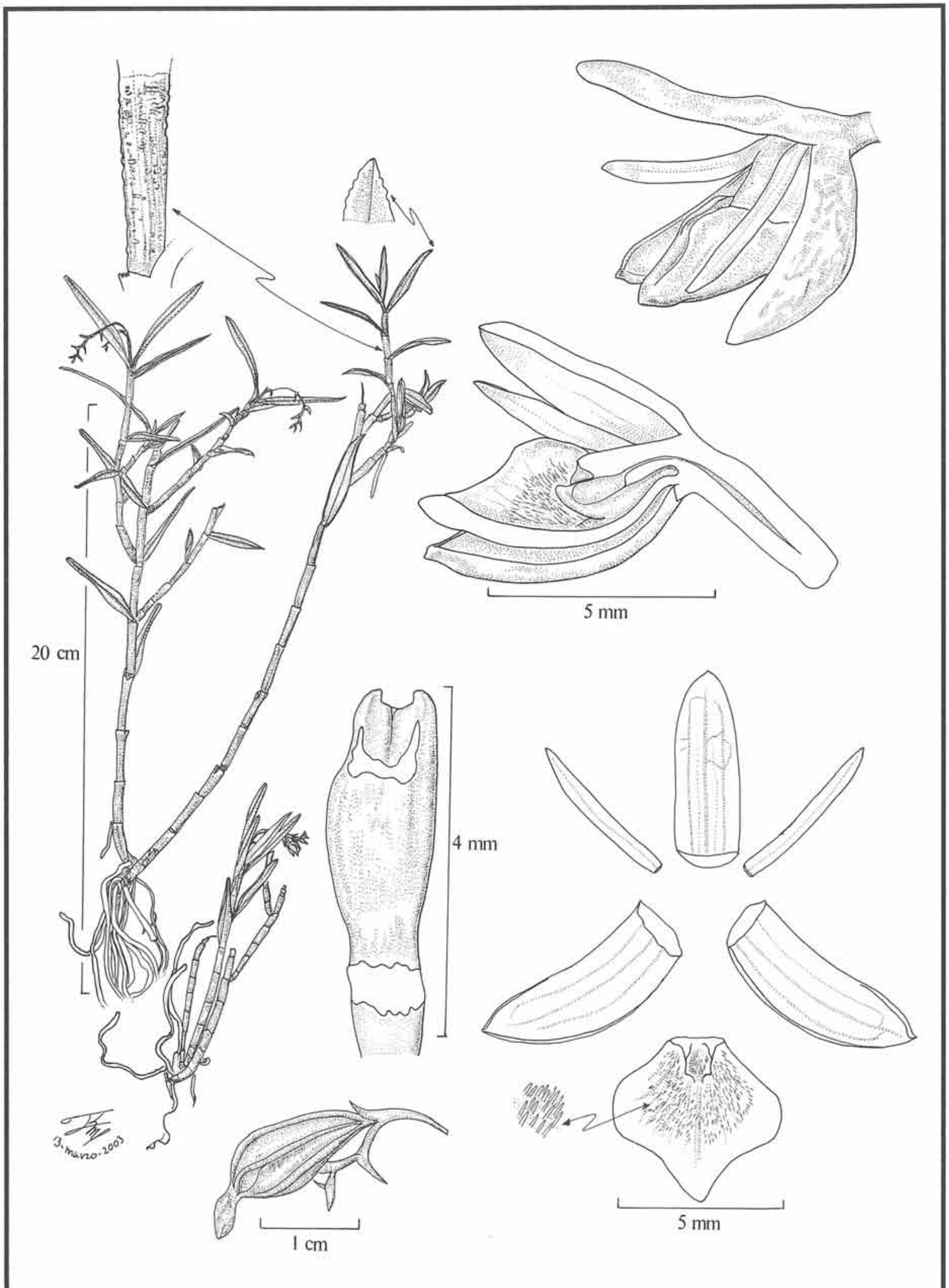
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the similarity of the plant in size and appearance of the leaves to the genus *Pachyphyllum*, from the Greek παχυς - thick, and φυλλον- leaf, and the ending οιδες- indicating resemblance.



Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM PICONEBLINAẼNSE Hágsater Plate 775

EPIDENDRUM PICONEBLINAËNSE Hágsater, *sp. nov.*

Type: VENEZUELA: Amazonas, northeast side of Cerro de la Neblina, 1900 m, 16 October 1970, ***Julian A. Steyermark 103971.*** Holotype: AMES! (Illustration voucher).

Epidendro elleanthoide Schltr. simile sed habitu vegetativo magis arboriformi, caule principali ramisque minoribus, floribus leviter majoribus, petalis proportione longioribus differens.

Hierba epífita, erecta, ramificada, de más de 25 cm de alto. **Raíces** basales y ocasionalmente de las ramificaciones, delgadas, carnosas, 1.0-1.2 mm de grosor. **Tallos** principales ramificados, teretes, delgados, rectos, de más de 21 x 0.2-0.26 cm; las ramificaciones mas cortas, 8.5-12.5 x 0.14-0.18 cm. **Hojas** 6 ó más en el tallo principal, 6-7 en las ramas, distribuidas a lo largo de los tallos; vaina tubular, estriada y ligeramente verrugosa, 7-21 x 1.2-2.2 mm; lámina linear lanceolada, ápice agudo, margen apical irregularmente eroso, crenado, herbácea; 16-46 x 2-5 mm. **Bráctea espatácea** ausente. **Inflorescencia** apical, paniculada, 3.5-4 cm de largo; pedúnculo, terete, filiforme, desprovisto de brácteas, 8-12 mm; con un segundo pedúnculo de 12-15 mm de largo arriba del primer racimo; raquis en zigzag, 12-15 mm de largo. **Brácteas florales** tan largas como el ovario, triangulares, acuminadas, abrazadoras, 2-4 mm de largo. **Flores** 3-6, por racimo, sucesivas, verde olivo, sin datos de fragancia. **Ovario** corto, terete, delgado, no inflado, no ornamentado, 2-3.7 mm de largo. **Sépalos** entreabiertos, libres, oblongos, margen entero; el **dorsal** redondeado, diminutamente apiculado, 3-nervado, con un par de nervaduras secundarias intermedias; 5.5 x 2 mm, los **laterales** agudos, 3-nervados, oblicuos, 6.1 x 2.2 mm. **Pétalos** entreabiertos, libres, linear oblongos, subagudos, 1-nervados, margen entero, 5 x 0.5 mm. **Labelo** unido a la columna, entero, rómbico, los ángulos laterales redondeados, ápice agudo, carnoso, los lados vueltos hacia arriba ocultando el ápice de la columna en posición natural, sin abrazarla, 5 x 5 mm; unicalloso, el callo en forma de plataforma, o forma de "T" terminado en una quilla corta, pubescente. **Columna** corta, recta, gruesa, geniculada en la base a un ángulo de 45° con respecto del ovario, 2.5 mm de largo. **Clinandrio** reducido, entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** corto, sin traspasar el perianto, pubescente frente a la cavidad estigmática. **Cápsula** elipsoide, 16 x 7 mm; pedicelo 2 mm de largo, cuerpo 12 x 7 mm, cuello apical 1 mm de largo.

Epiphytic, erect, branching **herb. Roots** basal and occasionally from the base of some branches, thin, fleshy. **Stems** branching, terete, thin, straight, the branches shorter. **Leaves** more than 6 on the main stem, 6-7 on the branches, distributed throughout the stems; sheaths tubular, striated, slightly verrucose; blade linear-lanceolate, acute, apical margin irregular erose-crenate, grass-like. **Inflorescence** apical, paniculate, peduncle terete, filiform, rachis zigzag. **Floral bracts** as long as the ovaries, triangular, acuminate. **Flowers** 3-6 per raceme, successive, olive-green. **Ovary** terete, unornamented. **Sepals** partly spreading, free, oblong, margin entire; **dorsal** rounded, minutely apiculate, 3-veined, with a pair of intermediate secondary veins, **laterals** acute, 3-veined, oblique. **Petals** partly spreading, free, linear-oblong, subacute, 1-veined, margin entire. **Lip** united to the column, entire, rhombic, the lateral angles rounded, apex acute, fleshy, sides upturned, hiding the apex of the column without covering it; callus forming a "T" shaped platform ending in a short keel, pubescent. **Column** short, straight, geniculate at the base forming a 45° angle with the ovary. **Clinandrium hood** reduced, entire. **Nectary** short, not penetrating the ovary, pubescent opposite the stigmatic cavity. **Capsule** ellipsoid, with a short pedicel and apical neck.

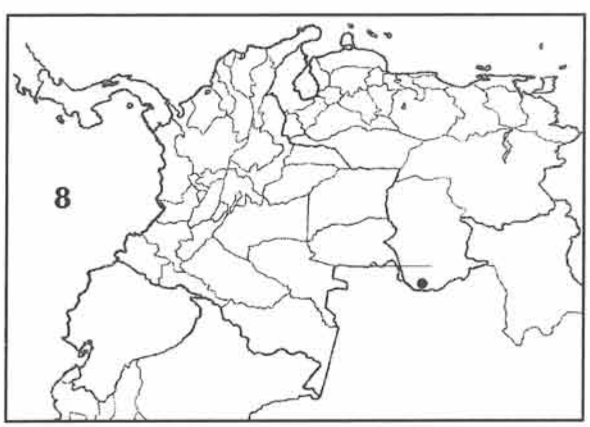
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the Venezuelan Amazon, on the Brazilian border, growing in savanna-like, semi-level area on summit of Cerro de la Neblina, at 1900 m altitude. The Cerro de la Neblina is a lonely peak near the Rio Negro on the border between Venezuela and Brazil, near the Equator. Flowering in October.

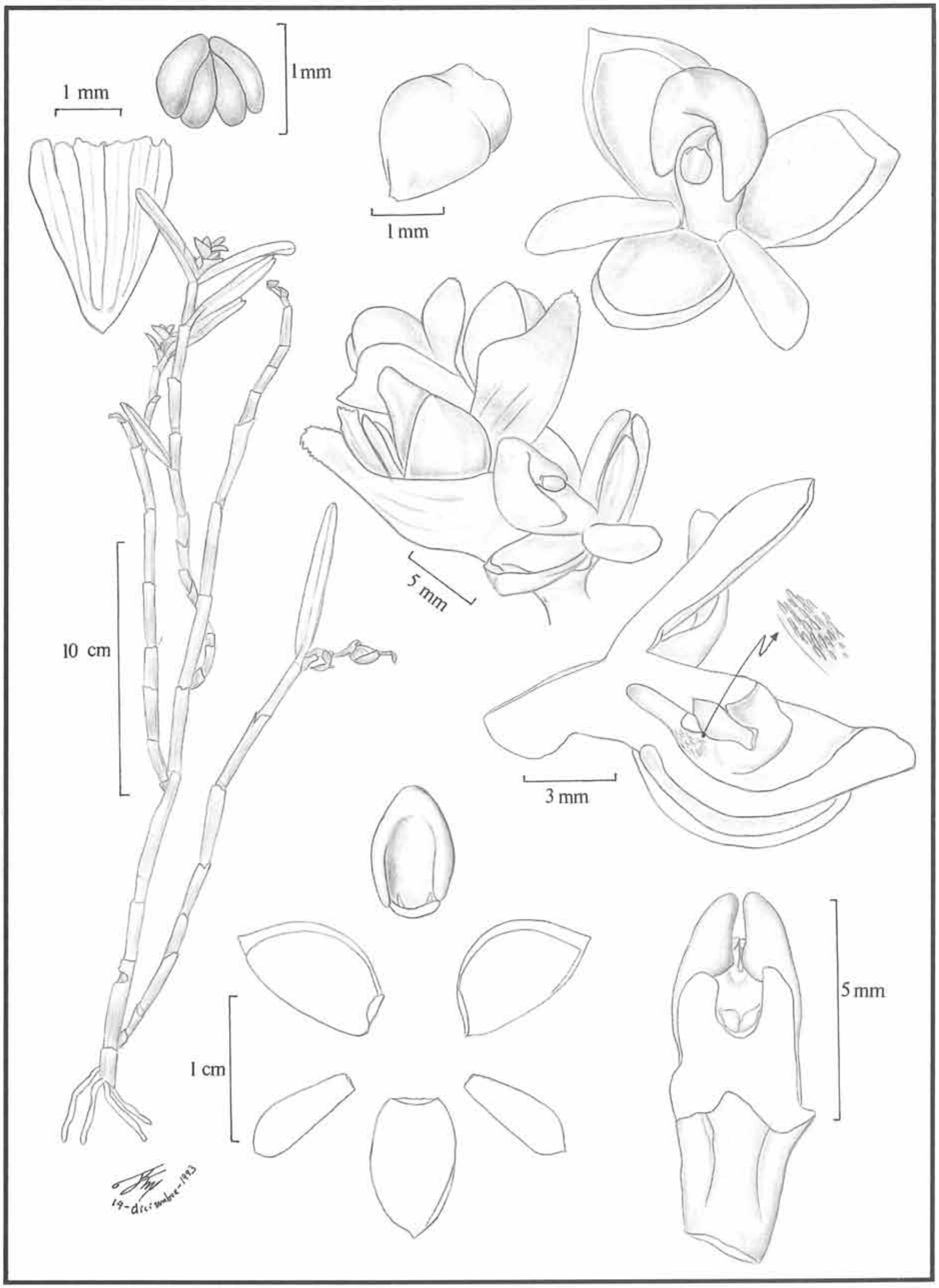
RECOGNITION: *Epidendrum piconeblinaënse* belongs to the Elleanthoides Group, Guacamayense Subgroup, characterized by the many branching thin canes, with long, narrow, grass-like leaves, the paniculate inflorescence with hair-thin peduncles, small flowers, oblong petals and a fleshy lip which embraces the column. The new species is recognized by the tree-like architecture, with a sturdy main stem and short branches, intermediate-sized flowers, oblong sepals 5.5-6.1 mm long, the linear-oblong petals 10:1 in length/width, and a rhombic lip. It is similar to *Epidendrum elleanthoides* which has very small flowers (sepals 3.7-4.8 mm long) with the sides of the transversely elliptic to trullate, apiculate, lip embracing the column without overlapping and the oblong petals about six times longer than broad. *Epidendrum guacamayense* has flowers nearly twice as large, the segments narrower and the petals about 15 times longer than broad, and the lobes of the lip overlapping above the column. *Epidendrum saccatum* Hágsater has shorter leaves, and a very broad, reniform lip with a sac-like base and without any ornamentation. *Epidendrum montispichinchense* Hágsater & Dodson has leaves about twice as wide and larger flowers, with the nectary forming a wide, rounded cavity.

CONSERVATION STATUS: DD. Data deficient. Apparently highly endemic in a protected area, declared by both Venezuela and Brazil, and isolated in the middle of the Amazon basin.

ETYMOLOGY: In reference to Pico de Neblina (Brazil) or Cerro de la Neblina (Venezuela) where the species has been collected.



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EPIDENDRUM PLATYSTACHYUM Hágsater

Plate 776

EPIDENDRUM PLATYSTACHYUM Hágsater, *sp. nov.*

Type: COLOMBIA: Antioquia: Urrao, carretera entre Urrao y Carmen de Atrato, 2440 m, 14 agosto 1993, ***Rodrigo Escobar 5380.*** Holotype: AMO! (Illustration voucher.)

Epidendro macrostaphyo Lindl. simile sed minus, inflorescentia brevi, floribus bracteis latis tectis, ovario brevi recedit.

Hierba terrestre, cespitosa, ca. 40 cm de alto. **Raíces** basales, carnosas, 2-3 mm de grosor. **Tallos** erectos, ramificados cuando maduros, tipo caña, 35 x 0.4-0.5 cm, las ramas 5-17 x 0.3-0.4 cm. **Hojas** distribuidas a lo largo de la mitad apical del tallo, las basales caedizas; vainas tubulares, finamente rugosas, hasta 3.5 cm de largo; lámina angostamente elíptico oblonga, redondeada, margen finamente eroso en el ápice; las del tallo principal no vistas, las de las ramas 3.5-6.5 x 0.7-0.9 cm. **Espata** ausente. **Inflorescencia** apical, corta y compacta, del tallo maduro o de las ramificaciones, florece una sola vez, racemosa, suberecta, raquis sinuoso, 1.5-3 cm de largo; pedúnculo con una bráctea en la base, en ocasiones foliosa. **Brácteas florales** prominentes, tan largas como la flor, progresivamente más cortas, extendidas, triangular ovadas, algo carinadas hacia el ápice obtuso, margen entero, finamente erosos hacia el ápice, 7-14 x 8-10 mm. **Flores** 3-4, no resupinadas, sucesivas, carnosas, con pocos cristales al secarse o ponerse en FAA, color ocre, la base de la columna verde, el ápice blanco. **Ovario** no inflado, no ornamentado, corto, 4 mm de largo. **Sépalos** entreabiertos, elípticos, obtusos, carnosos, glabros; el **dorsal** 7.5 x 5 mm; los **laterales** oblicuos, 9 x 5 mm. **Pétalos** extendidos, oblanceolados, obtusos, carnosos, 6.5 x 2.5 mm. **Labelo** entero, cimbiforme, profundamente cordado, redondeado, carnoso, no se puede extender una vez rehidratado, 7.5 x 6 mm; ecalloso, sin quillas, en posición natural los lados abrazando el ápice de la columna. **Columna** recta, gruesa, 5 mm de largo, el ápice redondeado. **Clinandrio** obsoleto, entero. **Antera** ovoide, aguda, carnosa, 4 locular. **Polinios** 4, obovoides, lateralmente comprimidos, caudículas suaves y granulosas, viscidio semilíquido. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de 1/4 del largo de la cavidad estigmática. **Nectario** apenas penetrando hasta el perianto, ornamentado con papilas alargadas frente al estigma, reclinadas y dirigidas hacia el interior. **Cápsula** no vista.

Caespitose, terrestrial **herb**. **Stems** erect, branching with age. **Leaves** narrowly elliptic-oblong, rounded, apical margins finely erose. **Inflorescence** apical, racemose, short, compact, rachis sinuous. **Floral bracts** as long as the flower and very wide, progressively shorter, spreading, triangular-ovate, margins entire, apex finely erose. **Flowers** 3-4, non-resupinate, successive, ochre, base of the column green, apex white. **Sepals** partly spreading, elliptic, obtuse, fleshy. **Petals** spreading, oblanceolate, obtuse. **Lip** cymbiform, entire, cordate, rounded; ecallose. **Column** straight, thick, apex rounded. **Clinandrium hood** obsolete, entire. **Anther** ovoid, acute, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granulose, viscidium semiliquid. **Rostellum** subapical, slit. **Nectary** not penetrating beyond the perianth, ornamented with elongate papillae opposite the stigmatic cavity.

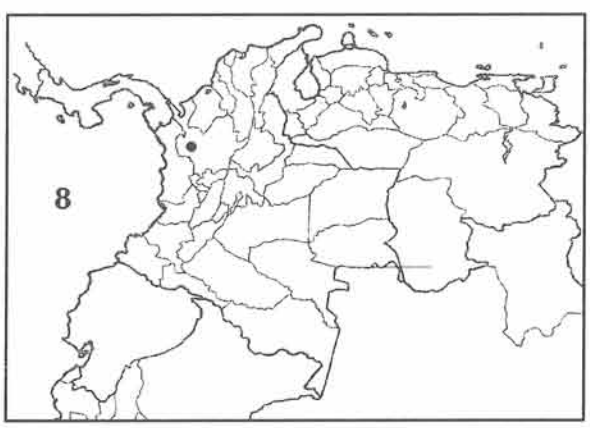
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Colombia, on Cordillera Occidental along the border between the departments of Antioquia and Chocó, at 2440 m altitude, terrestrial or on rocks in montane and cloud forest. Flowering in August-September.

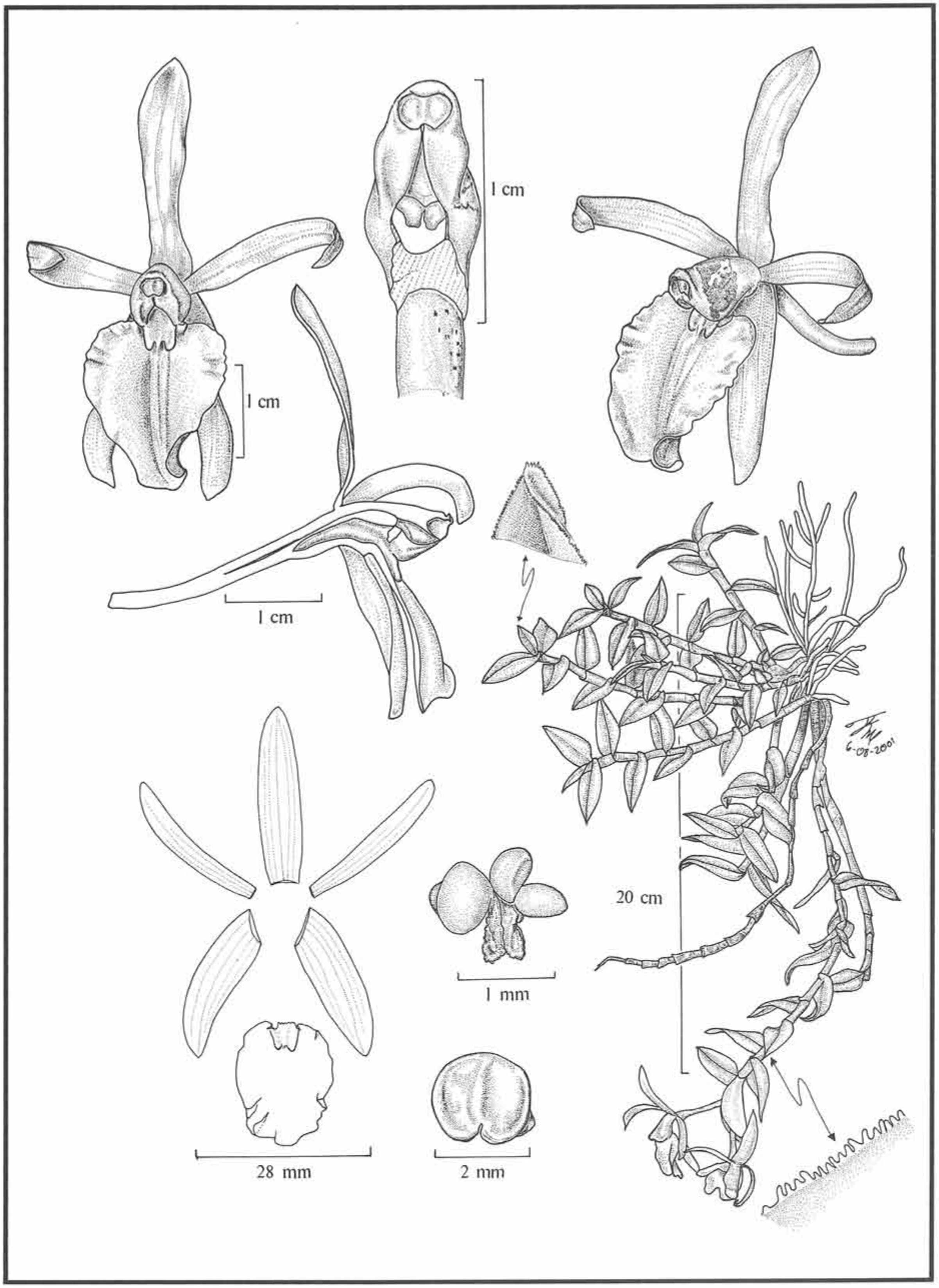
RECOGNITION: *Epidendrum platystachyum* belongs to the Macrostachyum Group, which is characterized by the erect, branching, cane-like stems the base of the inflorescence without obvious spathaceous bracts, the erect or arching inflorescence with many flowers, the very fleshy lip that is folded and embracing the column, and the nectary pubescent to papillose in front of the stigmatic cavity. The new species is recognized by being much smaller overall, the inflorescence short and compact, the rachis sinuous, with successive flowers, the flowers ochre in color, the wide floral bracts, embracing the short ovary and flower, the oblanceolate petals and the small, narrowly elliptic-oblong, rounded leaves. *Epidendrum microcarpum* Hágsater & Dodson is similar in size, the elongate raceme is laxly flowered, the bracts smaller, narrow and acute, the petals oblong and the leaves elliptic-lanceolate and acute. *Epidendrum macrostachyum* is larger overall, with many flowers.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek βλατυς λατυς- wide and σταχυς- spike, in reference to the very wide floral bracts on a short spike that distinguish this species; the name also recalls the Macrostachyum Group to which it belongs.



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EPIDENDRUM PORTILLAE Hágsater & Dodson

Plate 777

EPIDENDRUM PORTILLAE Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Without locality, Hort. Ecuagenera, Cuenca, received 5 March 2000, flowered in Mexico, 6 August 2001, ***E. Hágsater 12397.*** Holotype: QCNE! (Illustration voucher).

Epidendro tigriphyllo Hágsater simile sed segmentis floralibus longioribus, petalis latioribus, labelli callo ad instar duarum laminarum humilium cum carina interjecta parva, columna arcuata differt.

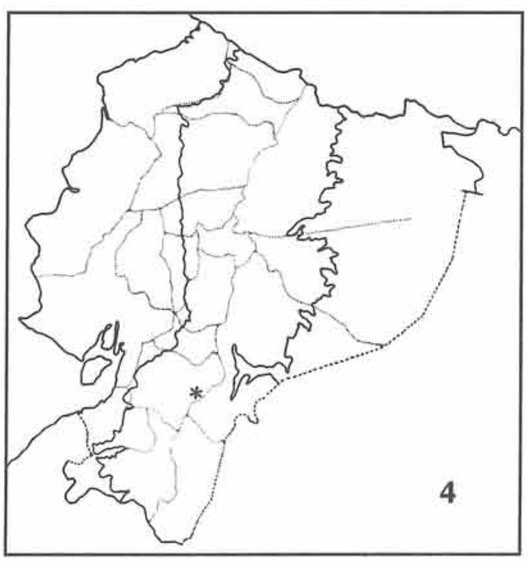
Hierba epífita, cespitosa, colgante, 12-20 cm de alto. **Raíces** basales, carnosas, delgadas, 0.8-1 mm de grosor. **Tallos** sencillos, tipo caña, teretes, originándose cerca de la base de tallos anteriores, 12-18 x 0.3-0.45 cm. **Hojas** 10-13, distribuidas a lo largo del tallo, equidistantes; vaina tubular, algo infundibuliforme, finamente estriada, 1.0-1.4 x 0.3-0.45 cm; lámina ovado lanceolada, ápice agudo, margen en la zona apical finamente ciliado, carnosa, de color verde pálido, algunas con diminutos puntos morados difuminados de manera irregular en la lámina, sin llegar a formar bandas transversales, 1.2-3.5 x 0.6-1.3 cm. **Bráctea espatácea** 1, conduplicada, oblicua, semiovada, truncada, margen apical diminutamente dentado, cubriendo aproximadamente la mitad de la longitud del ovario, teñida escasamente con puntos morados marginales, 25 x 9 mm. **Inflorescencia** apical, corta, subsésil, 4.8 cm de largo, pedúnculo oculto dentro de la espata. **Brácteas florales** mucho más cortas que el ovario y ocultas dentro de la espata, 2 mm de largo. **Flores** 2, simultáneas, resupinadas, de color verde claro con difuminaciones moradas a rojizas, la columna teñida de morado en la zona apical, fragancia muy desagradable, azufrosa, diurna. **Ovario** terete, delgado, ligeramente dilatado hacia el ápice, con difuminaciones moradas a lo largo del mismo, 30 mm de largo. **Sépalos** libres, extendidos, angostamente elípticos, subagudos, 3-nervado, con las nervaduras laterales ramificadas desde la base dando la apariencia de ser 5-nervado, margen extendido y entero, 25-28 x 6-7 mm; los **laterales** ligeramente oblicuos. **Pétalos** oblongos, obtusos, 3-nervados (las nervaduras laterales cortas), márgenes extendidos y enteros, 25 x 3.5 mm. **Labelo** unido a la columna, entero, ligeramente cordado, subovado, redondeado, margen entero, al extenderse, los márgenes quedan ondulados, 20 x 15 mm; bicalloso, los callos muy pequeños, laminares pero gruesos, con una carina intercallosa corta, desvaneciéndose mucho antes de llegar a la parte media del disco. **Columna** ligeramente arqueada, el ápice oblicuo por efecto del clinandrio prominente, 12 mm de largo. **Clinandrio** prominente, sobrepasando ligeramente el cuerpo de la columna, carnoso, entero. **Antera** reniforme, 4-locular. **Polinios** 4, subiguales, obovoides; caudículas suaves y granulosas, más largas que los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de ¼ del largo de la cavidad estigmática. **Nectario** penetrando un cuarto del ovario, no inflado, no ornamentado. **Cápsula** no vista.

Epiphytic, caespitose, pendent **herb. Roots** basal, thin. **Stem** simple, cane-like, terete. **Leaves** 10-13, evenly distributed throughout the stem, sheath tubular, somewhat infundibuliform; blade ovate-lanceolate, acute, apical margin minutely ciliate, fleshy, pale green, with scarce, minute purple dots that do not form transversal bands. **Spathaceous bract** one, conduplicate, oblique, semiovate, truncate, apical margin minutely dentate, covering about half the ovary. **Inflorescence** apical, short, subsessile. **Floral bracts** much shorter than the ovary. **Flowers** two, simultaneous, resupinate, light green, with scarce purple to reddish markings, column tinged purple towards the apex; fragrance very disagreeable, sulfur-like, at mid-day. **Ovary** thin, terete, dilated towards the apex. **Sepals** free, spreading, narrowly elliptic, subacute, margin entire, 3-veined, the **lateral** veins bifurcate from near the base, lateral sepals oblique. **Petals** oblong, obtuse, margins entire, 3-veined, the lateral veins short. **Lip** united to the column, entire, somewhat cordate, subovate, rounded, when flattened the margins undulate; bicallose, the calli laminar but thick, with an intermediate low keel. **Column** slightly arching, the apex oblique due to the prominent clinandrium. **Clinandrium hood** prominent, slightly surpassing the body of the column, fleshy, entire. **Rostellum** apical, slit. **Nectary** penetrating one-fourth of the ovary, not inflated.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Probably from southern Ecuador. There are numerous plants in cultivation at Ecuagenera, near Cuenca, Ecuador. Flowering in cultivation in Ecuador in January, in Mexico in August.

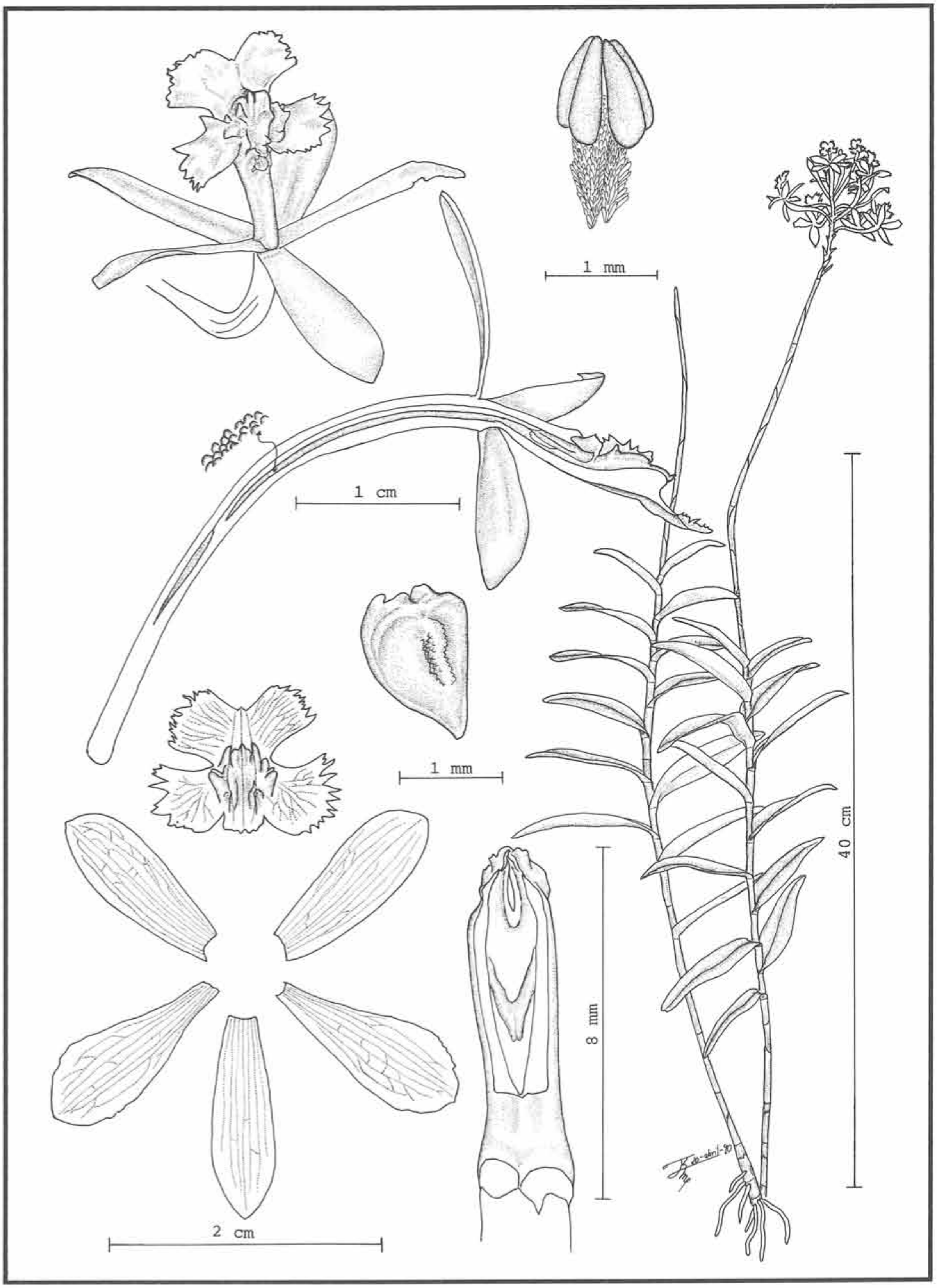
RECOGNITION: *Epidendrum portillae* belongs to the Megalospathum Group characterized by the caespitose but branching habit, many-leaved stem, fleshy, oblique leaves, a short, few flowered, raceme subtended by large semiovate spathe, resupinate flowers, the column obliquely united to the lip, occasionally free. The species has large flowers, the sepals 25-28 mm long, 3.5 mm wide petals, the lip somewhat cordate, subovate, the margins undulate when flattened, with two thick, laminar keels, the slightly arching column with a prominent, entire, fleshy clinandrium. It closely resembles *E. tigriphyllum* which has somewhat smaller flowers, the sepals 22-23 mm long, narrower petals, up to 2 mm wide, a shorter, cordiform lip with the prominent callus formed by two superimposed pairs of calli, and the straight column with a prominent, fleshy, expanded clinandrium.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of José Portilla, of Ecuagenera, a commercial establishment near Cuenca, Ecuador, who has a well established nursery and provided the type material.

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EPIDENDRUM PORTOKALIUM Hágsater & Dodson **Plate 778**

EPIDENDRUM PORTOKALIUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR, Morona-Santiago: Pedregal Río Upano, unos 11 km río arriba de Macas hacia Puyo, 1050 m, epífita, col. 23 Nov. 1988, ***E. Hágsater, C.H. Dodson, N.H. Williams, M. Whitten & F.G. Thompson 9700.*** Holotype: pressed 1 June 1990: QCNE! Isotype: AMO! Clonotype: 21 June 1992, SEL!

Epidendro cochlidium Lindl. simile sed callo breviore, labelli sino apicali non attingenti, plantis semper epiphyticis in altitudinibus intermediis, terrestris in altitudinibus majoribus recedens.

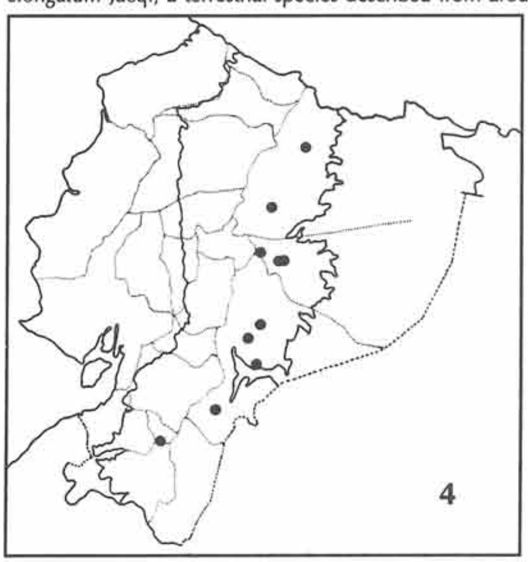
Hierba epífita, cespitosa, erecta, de 120-175 cm de alto. **Raíces** basales, carnosas, gruesas, 0.5-4.5 mm de grosor. **Tallos** sencillos, tipo caña, teretes, delgados, rectos, 87-105 x 0.4-0.9 cm. **Hojas**, 10-14, alternas, dísticas, distribuidas a lo largo del tallo, desiguales, las basales y las apicales generalmente más pequeñas; vaina tubular, lisa, finamente estriada cuando seca, algunas teñidas de púrpura, 2.5-7.6 x 0.4-0.9 cm; lámina lanceolada, ápice desigualmente bilobado, margen entero, coriácea, lisa, verde, 4.3-16 x 1.7-3.5 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, produce nuevos racimos con el tiempo; pedúnculo alargado, terete, 57-111 cm de largo, cubierto totalmente por vainas tubulares, agudas, finamente estriadas, algunas coloreadas de púrpura, 6.0-9.0 cm de largo. **Flores** 30-44, sucesivas, de 4-15 abiertas de manera simultánea, no resupinadas, anaranjado rojas, con callo amarillo (secan en amarillo paja), sin fragancia. **Brácteas florales** mucho más cortas que el ovario, triangulares, acuminadas, 2-17 mm de largo. **Ovario** delgado, terete, no inflado, no ornamentado, 21-35 mm de largo. **Sépalos** extendidos, libres, elípticos, obtusos, apiculados, con una quilla dorsal diminuta, margen extendido y entero, glabros, 7-nervados, 9-17 x 3.6-5.2 mm; los laterales oblicuos. **Pétalos** extendidos, libres, angostamente elípticos, agudos a redondeados, margen extendido y entero, 3-nervados, 10.5-16 x 3-6 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, margen fimbriado, 9-10 x 11-12 mm; el callo masivo, representado por una estructura de 7 tubérculos desiguales, ubicado sobre el istmo, sin llegar al seno de lóbulo apical; lóbulos laterales semiovados, 4-5 x 5-6 mm; lóbulo medio 6 x 10 mm, flabeliforme, ápice profundamente emarginado, formando dos lóbulos; los lóbulos subcuadrados 3-4 x 3-4 mm. **Columna** corta, recta, delgada, con 2 lóbulos apicales cortos, erectos, con el margen irregularmente dentado, 5 mm de largo. **Clinandrio** reducido, entero, la antera totalmente expuesta. **Antera** ovada, con un diminuto mucrón, verde, 4-locular. **Polinios** 4, alargados, lateralmente comprimidos, subiguales; caudículas más largas que los polinios, formadas por tétradas en forma de tejas apiladas; viscidio semilíquido, transparente. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/3 del largo de la cavidad estigmática. **Nectario** penetrando cerca de la mitad del ovario, papiloso. **Cápsula** angostamente elíptica, cuerpo 29 x 5.2 mm, pedicelo 13.8 x 0.6 mm, cuello 14.2 x 0.7 mm.

Epiphytic, caespitose **herb. Stems** simple, cane-like, terete. **Leaves** distributed throughout the stem, blade lanceolate, apex unequally bilobed, coriaceous. **Inflorescence** apical, racemose, producing new racemes with time, peduncle elongate, completely covered by tubular sheaths. **Flowers** successive, several open at one time, non-resupinate, orange-red, the callus yellow (flowers dry straw colored). **Floral bracts** much shorter than the ovary, triangular, acuminate. **Ovary** thin, terete. **Sepals** spreading, elliptic, obtuse, apiculate, margin entire, 7-veined, the laterals oblique. **Petals** spreading, narrowly elliptic, acute to rounded, margin entire, 3-veined, **Lip** 3-lobed, base deeply cordate, margin fimbriate, callus massive, formed by seven unequal tubercles on the isthmus of the lip, not reaching the sinus of the apical lobe; lateral lobes semiovate, midlobe flabelliform, deeply emarginate, forming two subquadrate lobes. **Column** straight, thin, with a pair of small, apical, erect, dentate lobes. **Clinandrium hood** reduced, entire. **Nectary** penetrating about half the ovary, papillose.

OTHER SPECIMENS: ECUADOR: Cotopaxi: Choasillí, 1725 m, 8 VIII 2003, *Silverstone-Sopkin 9927*, QCNE! **Morona-Santiago**: Patuca-Santiago-Morona, Río Santiago, km 62, 800 m, *Hágsater 9652*, AMO! QCNE! Ibid. *9658*, AMO! Ibid. *9662*, AMO! SEL! Huambinimi, *Hágsater 9667*, AMO! Tucumbataza, 1600 m, 20 IV 1985, *Harling 24379*, GB! **Napo:** Hollín, 1100 m, *Hágsater 9763*, AMO! QCA! Hollín to Coca, 1100 m, 30 IV 1987, *Dodson 17084*, RPSC! Lumbaquí, 8 XII 1986, *Hágsater 9057*, AMO! (Illustration voucher). Tena to Pano, 750 m, 14 XII 1976, *Davis 403*, GH! Tena, 800 m, 15 I 1991, *Cudiño 1251*, MO! QCA! **Pastaza:** Vera Cruz, 900 m, 18 II 1956, *Asplund 19439*, S! Puyo, 800 m, 21 IV 1958, *Dodson 328*, SEL! Mera, 1160 m, 28 XII 1958, *Harling 3690*, S! Ibid. *Harling 3714*, S! Ibid. *Harling 3738*, S! Puyo, 15 II 1953, *Prescott 437*, NY! **LOJA POPULATION: Loja:** Sàn Lucas, 2100 m, 8 X 1955, *Asplund 18057*, AMES! NY! San Lucas, 2070 m, 21 X 1980, *Croat 50841*, MO! SEL! San Lucas, 2500 m, 3 VIII 1960, *Dodson 200*, SEL! San Lucas, 2200 m, 15 IX 1961, *Dodson 558*, SEL! Km 45, *Dodson 599*, QCA! SEL! San Lucas, hort. Mexico, 8 II 1984, *Hágsater 5904*, AMO! QCNE! SEL! Ibid. 7 XI 1984, AMO! QCNE! Loja-Zamora, 2-7 km W of pass, 2400-2700 m, 17 VI 1979, *Løjtnant 15042*, AAU! GB!

DISTRIBUTION AND ECOLOGY: Widespread along the eastern lowlands of Ecuador, at the foot of the Andes, at 725-1600 m, altitude. Epiphytic in undisturbed forest, disturbed habitats and citrus groves. Flowering in November to April.

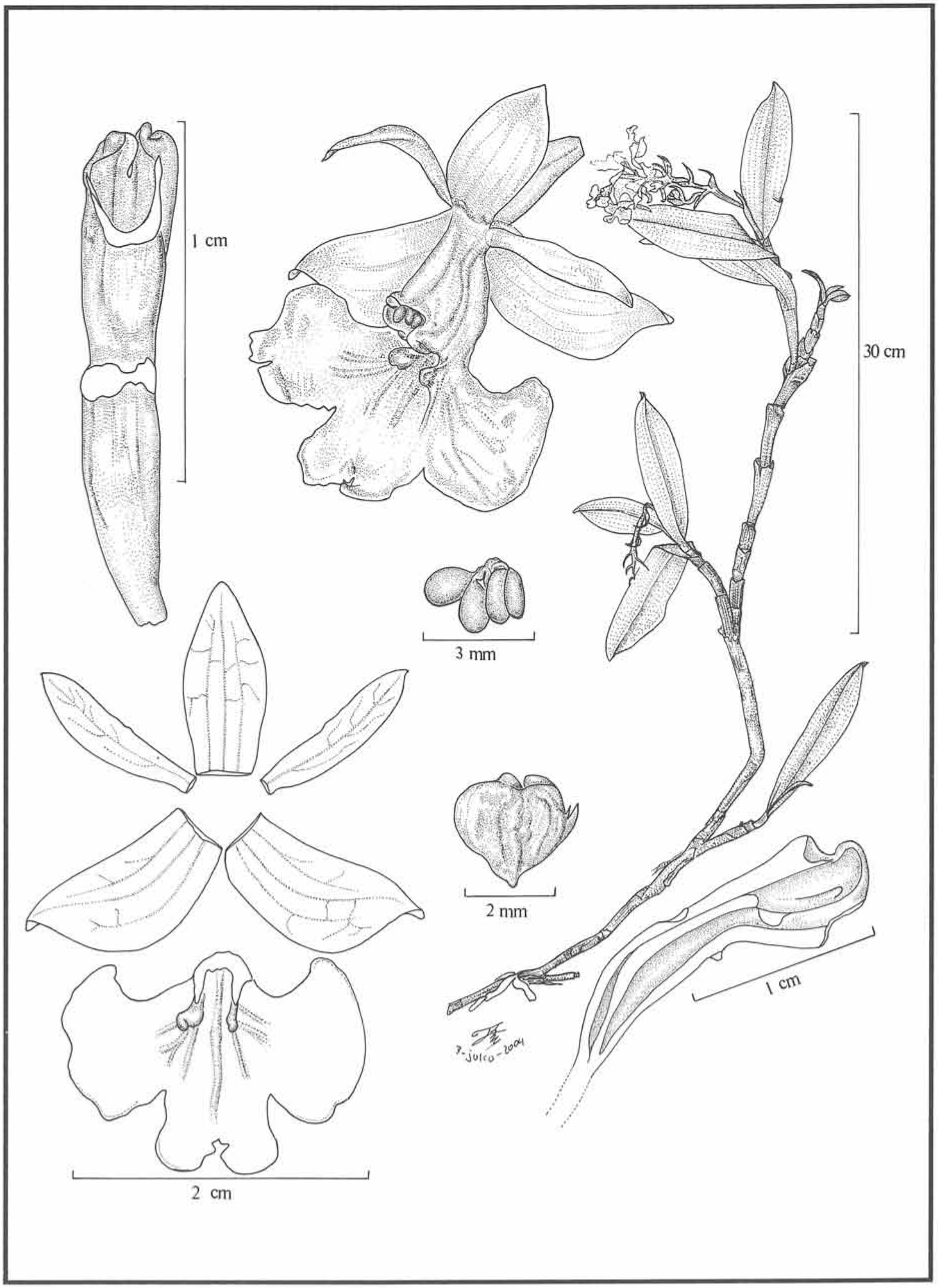
RECOGNITION: *Epidendrum portokalium* belongs to the Secundum Group and Subgroup, recognized by the elongate inflorescence with bright colored, non-resupinate flowers with a complicated callus. This species is epiphytic and has orange-red colored flowers with a yellow callus, the lateral lobes of the column are dentate, petals wider than the sepals, and the callus is unequally 7-tuberculed. *Epidendrum elongatum* Jacq., a terrestrial species described from around Caracas and which also has orange flowers, has a much smaller callus. *Epidendrum cochlidium* Lindl. described from a collection by Mathews from Peru is said to have a large, complex callus, with the apex of the callus reaching the apical sinus of the lip; though color was not recorded by the collector, only suggested by Lindley probably on the basis of the dried material which is brown today. *Epidendrum caquetanum* Schltr. is also epiphytic, but has orange-red flowers with a 3-lobed, white, callus, and the petals are narrower than the sepals. *Epidendrum macrocarpum* L.C. Rich. which is larger overall, usually associated with ants, has a bicallose lip and much larger flowers (sepals 20-35 mm long) in shades of orange and yellow



NOTE: Species in the Secundum Subgroup are very similar from a morphological point of view and in nature tend to form hybrid populations where the ecological barriers have been broken down. It is thus very difficult to identify species from single plants without geographical and ecological data. However, knowledge of the plants in the field permits the recognition of diverse species. There are similar plants growing around San Lucas in Loja province, terrestrial, with somewhat smaller flowers, and at an altitude of 1600-2700 m. As the relationship between both populations has not been established, they are not included in this description of the taxon, but specimens are cited separately.

CONSERVATION STATUS: Not threatened. The species grows abundantly in natural as well as disturbed habitats including citrus groves.

ETYMOLOGY: From the Greek πορτοκαλιον- an orange, in reference to the bright orange-red color of the flowers.



EPIDENDRUM PRIETOI Hágsater & Dodson

Plate 779

EPIDENDRUM PRIETOI Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Cañar: Valley of Río de Cañar, near El Corazón, between San Vicente and Rosario, 3300 ft., 6-10 September 1944, ***F. Prieto CP-8.*** Holotype: NY! (Illustration voucher).

Epidendro ochrochloro Barb. Rodr. affine sed planta et floribus majoribus, labello lobulis lateralibus dolabriformibus, ad marginem basalem concavis et distalem convexis, ovario breviore differt.

Hierba epífita de simpodio erecto, de más de 60 cm de alto. **Raíces** gruesas, de la base de los tallos inferiores, de 4 mm de grosor. **Tallos** erectos, produciendo tallos sucesivos, tipo caña, teretes, los tallos se producen del 4° al 6° entrenudo del tallo anterior, hacia los 2/3 apicales del tallo, 15-19 x 0.4-0.6 cm. **Hojas** 3, agregadas hacia el ápice, subcoriáceas; vaina tubular, finamente estriada cuando seca, 8-32 mm de largo; lámina elíptica, aguda, dorsalmente carinada, 5.4-9.5 x 1.7-2.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, florece una sola vez, nutante, 4-11 cm de largo; pedúnculo, lateralmente comprimido, bialado, de 2.5-4.5 x 0.2-0.45 cm, en ocasiones con 1 bráctea hacia la base, angostamente triangular, acuminada, hasta de 30 mm de largo. **Bráctea floral** tan larga a más corta que el ovario, triangular, acuminada, 4-14 x 3-6 mm. **Flores** 5-12, sucesivas, varias abiertas a la vez, amarillento sucio, "isabelina", nervaduras amoratado pálido, fragancia no registrada. **Ovario** inflado ventralmente hacia el ápice y ligeramente arqueado, no ornamentado, 13-14 x 2.5 mm. **Sépalos** extendidos, elípticos, angostados hacia la base, agudos, 3-nervados, glabros, margen entero; el **dorsal** 12-13 x 4.5-6.0 mm; los **laterales** oblicuos, aristados, 14 x 5.5-6.5 mm. **Pétalos** extendidos, angostamente elíptico oblongos, agudos, 1-nervados, las nervaduras cortamente ramificadas a todo lo largo, margen entero, glabros; 13 x 2.5 mm. **Labelo** unido a la columna, trilobado, la base ámpliamente cuneada, con el margen apical de los lóbulos laterales retrorso, 15 x 21 mm; bicalloso, los callos bajos y alargados, con una quilla central roma, delgada y los callos prolongados por dos quillas bajas, romas, angostas, trídifas, radiantes, cortas, que más o menos cubren el disco; lóbulos laterales algo más grandes que el lóbulo medio, dolabriformes, el margen basal cóncavo, el distal convexo, 7 x 11 mm; lóbulo medio subcuadrado, ancho, el ápice profundamente bilobado, 6 x 8.5 mm. **Columna** ligeramente recta, gruesa, 7-10 mm de largo. **Clinandrio** reducido, margen entero. **Antera** ovoidea, aguda, carnosa, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas cortas, suaves y granulosas; viscidio semilíquido. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de 1/4 del largo de la cavidad estigmática. **Nectario** penetrando la mitad del ovario, algo inflado detrás del perianto, no ornamentado. **Cápsula** no vista.

Sympodial, epiphytic **herb.** **Roots** from the base of the lower stems, thick. **Stems** erect, produced from 2/3 of the previous stem, cane-like, terete. **Leaves** 3, aggregate towards the apex of the stem; sheath tubular, finely striated when dry; blade elliptic, acute. **Inflorescence** apical, flowering only once, racemose, nutant, the peduncle two-winged. **Floral bracts** as long to shorter than the ovary, triangular, acuminate. **Flowers** 5-12, successive, several open at one time, dirty yellow, with pale purplish veins. **Ovary** inflated ventrally and somewhat arched towards the apex. **Sepals** spreading, elliptic, somewhat narrowed towards the base, acute, 3-veined, margin entire. **Petals** elliptic-oblong, acute, 1-veined, branching, margin entire. **Lip** 3-lobed, the base widely cuneate but the lateral lobes retrorse towards the apical margin; bicallose, the calli narrow, long, the disc with 3 low, narrow keels, the lateral ones trifid, short; lateral lobes somewhat larger than the midlobe, dolabriform, the basal margin concave, the distal margin convex, midlobe subquadrate, apically deeply bilobed. **Column** straight, thick. **Clinandrium hood** reduced, entire. **Anther** ovoid, acute, fleshy, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles soft and granulose; viscidium semi-liquid. **Rostellum** subapical, slit. **Lateral lobes of stigma** 1/4 the length of the cavity. **Nectary** penetrating half the ovary, inflated behind the perianth, unornamented.

OTHER SPECIMENS: none seen.

DISTRIBUTION AND ECOLOGY: Known only from the Valley of the Río Cañar, probably at around 1000 m altitude. Flowering in August-September.

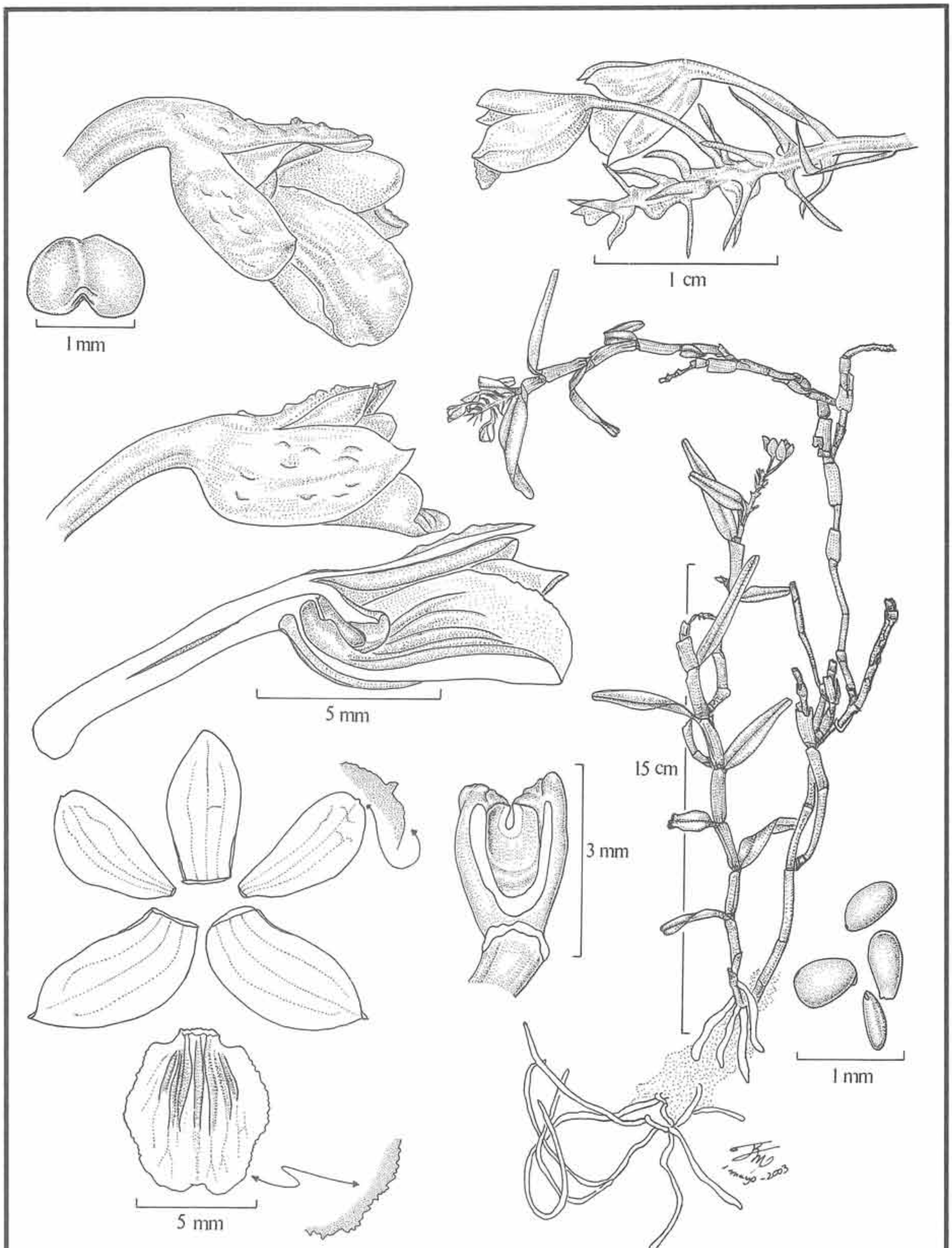
RECOGNITION: *Epidendrum prietoi* belongs to the Arbuscula Group, Incomptum Subgroup which is characterized by the sympodial habit, rarely branching, with the new stem produced from below the apex of the previous stem, with few or no roots at the base of each stem, the yellow-green to black flowers with a fleshy lip produced from a racemose, arching inflorescence. The new species is recognized by the two-winged peduncle, dirty yellow flowers with purplish veins, the 3-lobed, lip with the lateral lobes dolabriform, the basal margin concave, and the distal margin convex, 1-veined petals and long, narrow calli, the disc with 3 low, narrow veins, the lateral ones trifid, and the ovary somewhat inflated ventrally towards the apical half. *Epidendrum ochrochlorum* is much smaller overall, the sepals 9 mm long, and from Brazil. *Epidendrum homoion* Hágsater & Dodson, from the Amazon side of the Andes in Ecuador has wider floral segments (lip 14-16 x 26-28 mm), 3-veined petals, and a straight column. *Epidendrum yambalense* Hágsater & Dodson, has narrower and more acute segments, with the midlobe of the lip apiculate. *Epidendrum oenochromum* Hágsater & Dodson has fleshy, thickened, burgundy-red colored floral segments, suborbicular lateral lobes of the lip, and oblong, 3-veined petals. *Epidendrum tamaënse* Foldats is similarly colored buff to olive-green with purple veining on the lip, but the flowers are larger, sepals 15-21 mm long.



CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In honor of Francisco Prieto, who collected plants in southern Ecuador in 1943-45, in part with F. R. Fosberg, and W. H. Camp, and deposited specimens at AMES, MO, NY, QCNE, SEL and S.

Authors: E. Hágsater & C. H. Dodson **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM PSEUDOGLOBIFLORUM Hágsater & Dodson **Plate 780**

EPIDENDRUM PSEUDOGLOBIFLORUM Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Loja: Parque Nacional Podocarpus, E. of Nudo de Cajanuma, 79 10'W 4 5'S, 2900 m, 20 September 1989, ***A. Bøgh 47919.*** MO! (Illustration voucher). Isotype: AAU.

Epindendro globifloro F. C. Lehm. & Kraenzl. simile sed floribus aurantiacis usque ad rubris buccinatis, sepalis ad basem connatis, labello integro suborbiculari-hexagonali, columnae alis truncatis incrassatis discrepans.

Hierba epífita, de crecimiento sucesivo lateral, escasamente ramificada, 16-50 cm de alto. **Raíces** basales del tallo inicial, raramente de tallos superiores, carnosas, gruesas, blancas, 1-3 mm de grosor. **Tallos** sucesivos, originándose de los entrenudos apicales del tallo anterior, tipo caña, teretes, delgados, sinuosos; el basal 11-23 x 0.2-0.4 cm; los subsecuentes 6-15 x 0.17-0.4 cm. **Hojas** ca. 8 en el tallo basal, distribuidas a lo largo del mismo, 3-6 en los tallos subsecuentes, alternas, subcoriáceas, lisas; vaina tubular, algo infundibuliforme, estriada, finamente rugosa, 10-15 x 3.2-4.0 mm; lámina lanceolado oblonga, obtusa, bilobada, con una quilla dorsal baja, margen entero, 2-5 x 0.5-0.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, subglobosa, pluriflora, densa, erecta a arqueada, 1.5-2.2 cm de largo; pedúnculo muy corto, desprovisto de brácteas, 3-8 mm de largo. **Brácteas florales** de la mitad del largo del ovario, lanceoladas, agudas, gradualmente más pequeñas hacia el ápice, 2.5-4.5 mm de largo. **Flores** 7-20, simultáneas, resupinadas, en forma de trompeta, color naranja a rojo bermellón; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 6-8 mm de largo. **Sépalos** connados en la base, entreabiertos hacia el ápice, elíptico oblongos, subagudos, diminutamente apiculados, 3-nervados, margen entero, dorsalmente pustulosos, 6.4-7 x 3.1-3.7 mm; los **laterales** abruptamente falcados en la base. **Pétalos** entreabiertos, libres, obovados, arqueados, redondeados, diminutamente apiculados, 3-nervados, margen entero, el ápice diminutamente eroso, 5.8-6.2 x 2.8-3 mm. **Labelo** unido a la columna, entero, anchamente suborbicular hexagonal, base truncada, ligeramente retuso en el ápice, margen dentado, 5-6.2 x 5-6.2 mm; ecalloso; disco provisto de 7 quillas prominentes, lisas, que se desvanecen hacia la parte media del labelo. **Columna** corta, gruesa, doblada hacia arriba en la parte media, con un par de alas apicales truncadas, gruesas, no involutas, 2.5-3 mm de largo, cavidad estigmática ocupando casi la totalidad de la columna. **Clinandrio** prominente, carnoso, corto, margen entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, desiguales. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** no vistos. **Nectario** sin traspasar el perianto, delgado, redondeado en la base, no inflado, liso. **Cápsula** globosa, pedicelo 3-4.5 mm de largo, cuerpo 10-12 x 8-9 mm, cuello apical 2.5-4 de largo.

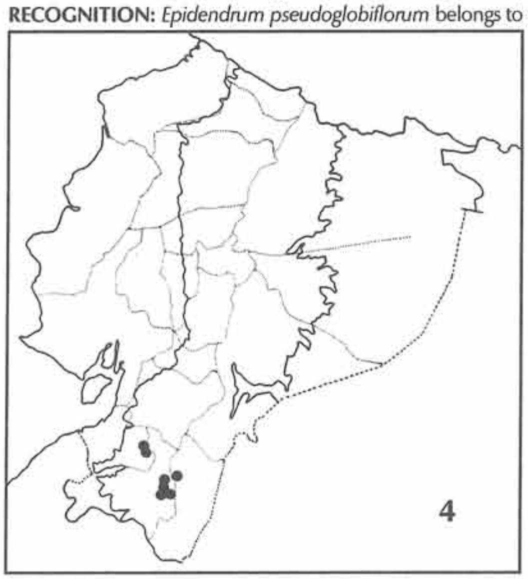
Epiphytic **herb** of successive lateral growth, rarely branching. **Roots** thick, fleshy, from the base of the initial stem, rarely above. **Stems** originating from an upper internode of the previous stem, cane-like, terete, thin, sinuous. **Leaves** about 8 on the initial stem, 3-6 on the upper stems, the sheaths tubular, somewhat infundibuliform when dry, striated minutely rugose; blade lanceolate-oblong, obtuse, bilobed, with a low dorsal keel, margin entire. **Inflorescence** apical, racemose, subglobose, many-flowered, dense, erect to arching, peduncle short, without bracts. **Floral bracts** about half as long as the ovary, lanceolate, acute. **Flowers** 7-20, simultaneous, resupinate, trumpet-shaped, orange to vermilion red. **Ovary** terete, thin. **Sepals** connate at the base, partly spreading towards the apex, elliptic-oblong, subacute, minutely apiculate, 3-veined, margin entire, dorsally pustulate, the laterals abruptly falcate near the base. **Petals** partly spreading, free, obovate, arching, rounded, minutely apiculate, 3-veined, margin entire, the apical margin minutely erose. **Lip** united to the column, entire, widely suborbicular-hexagonal, base truncate, apex slightly retuse, margin dentate; ecallose, disc with 7 prominent, smooth keels which disappear towards the middle of the lip. **Column** short, thick, bent upwards at the middle, with a pair of apical, truncate, thickened wings. **Clinandrium hood** prominent, fleshy, short, margin entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, unequal. **Rostellum** apical, slit. **Nectary** short, rounded, not entering the ovary. **Capsule** globose, pedicel thin, with an apical, thin neck.

OTHER SPECIMENS: ECUADOR: El Oro: Pueblo Viejo, 2550 m, 22 IV 1998, *Cornejo 6175*, QCNE! Chilla, 3100 m, 20 XI 1996, *Lewis 2851*, QCNE! Chilla, track to antennas, 3100 m, 7 XI 1997, *Lewis 3698*, QCNE! **Loja:** Nudo de Cajanuma, 2900 m, 26 X 1989, *Bogh 86576*, LOJA! Loja-Zamora, 2600 m, 14 VII 1983, *Bohlin 949* GB! Cumbre de Villonaco, 3300 m, 6 IX 1990, *Cerón 11889*, QCNE! Podocarpus National Forest, 2750 m, 25 VII 1985, *Dodson 16090*, MO! QCA! QCNE! Villonaco, 2900 m, 5 X 1946, *Espinosa 735*, AMES! LOJA! NY! W El Tiro, 2800 m, 25 IX 2001, *Madsen 8543*, LOJA! Nudo de Cajanuma, 2800-3000 m, 6 IX 1988, *Madsen 75258*, LOJA! Loja and Zamora, 2880 m, 24 IX 1967, *Sparre 18951*, S! Villonaco, 2500-2900 m, 24 IV 1987, *van der Werff 8955*, MO! (pro part.) **Zamora-Chinchipe:** Loja-Zamora, 23 IX 1982, *Balslev 3187*, QCA! Ibid. 2800 m, 28 IX 1961, *Dodson 756*, AAU! SEL! Ibid. 20 XI 1961, *Dodson 1479*, AAU! SEL! Ibid., 2600 m, 21 IX 1980, *Dodson 10520*, SEL! Ibid. 2800 m, 24 IX 1967, *Sparre 18951*, S!

OTHER RECORDS: ECUADOR: Without locality, Ecuagenera, *Hirtz 7884*, slide, AMO!

DISTRIBUTION AND ECOLOGY: Known only from around Loja, above Chilla in the province of El Oro, on the Cerro Villonaco and the eastern, wet side of the ridge of the Andes directly east and south of Loja, at 2600-3300 m altitude, terrestrial amidst moss or epiphytic in elfin cloud forest or scrubby páramo. Flowering from April to November.

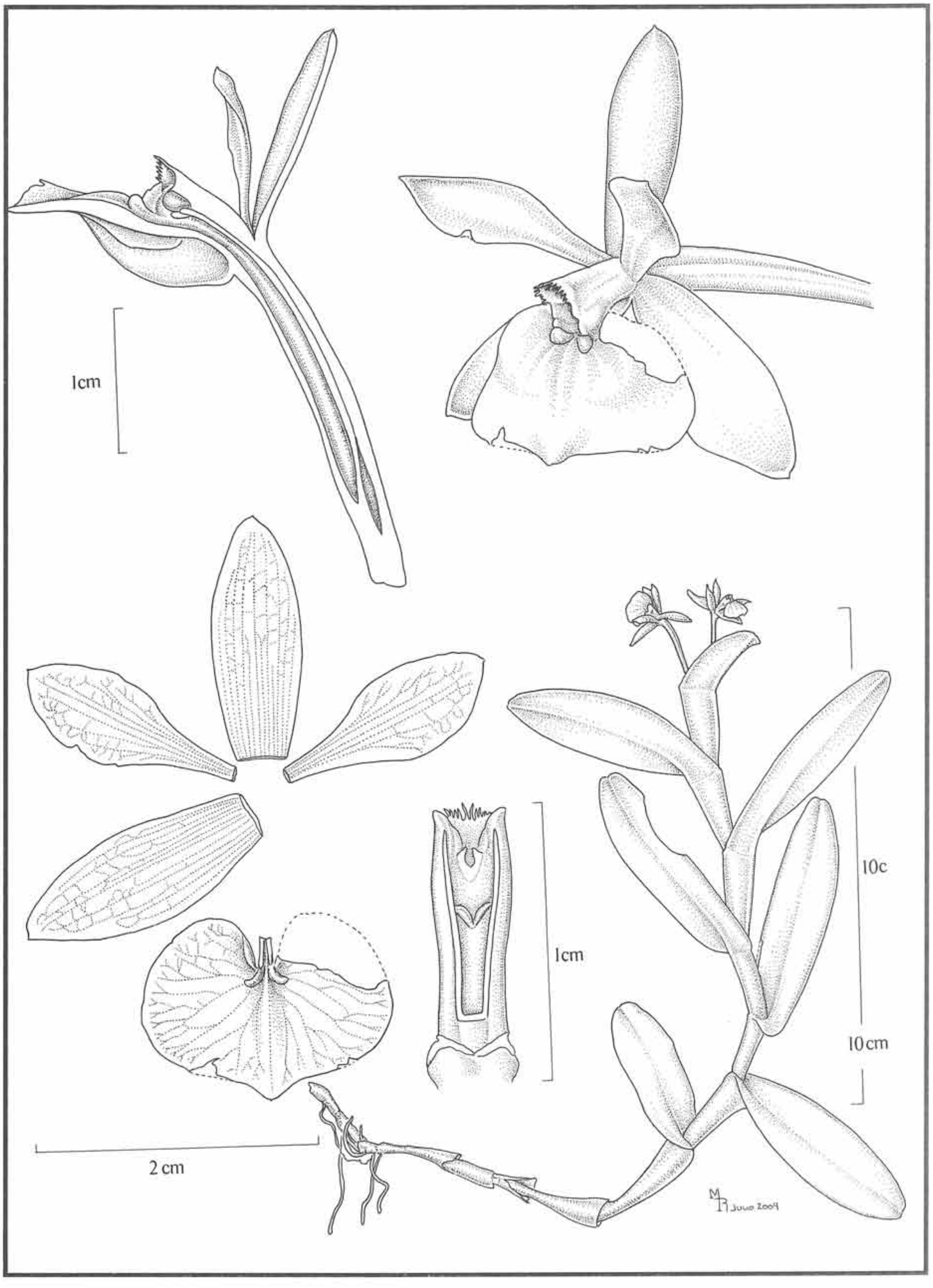
RECOGNITION: *Epidendrum pseudoglobiflorum* belongs to the Diothonea Group and Subgroup which is characterized by the branching habit, linear-lanceolate to lanceolate, bilobed leaves, arching-nutant, racemose inflorescence, membranaceous or rarely fleshy flowers, the lip entire to 3-lobed, with an erose margin, ecallose, without or with 1-10 thin, smooth to erose keels, the column united to the lip from totally to obliquely to free. The species is recognized by the trumpet-shaped, orange to vermilion-red flowers, connate, pustulate sepals, entire, ovate-hexagonal lip, ecallose with 7 prominent, smooth keels, obovate, arching, 3-veined petals, and the short, thick column which is arched upwards at the middle with the wings on the side truncate and thickened. It has been confused with *Epidendrum globiflorum* which is found nearby, but has a deeply 3-lobed lip, greenish white flowers, partly spreading, 6.0-7.5 mm long sepals; the column ends in a pair of outstretched, rounded, falcate wings, and the clinandrium is much reduced. *Epidendrum podocarpophyllum* Schltr. has salmon red/yellow flowers, longer, narrower leaves (30-50 x 3.5-5 mm), and somewhat shorter sepals (5 mm long), the inflorescence with 10-15 flowers and the lip 3-keeled, these short and basal, with the surface of the disc verrucose, the midlobe subquadrate, apically bilobed, lobes truncate.



CONSERVATION STATUS: DD. Data deficient. The species used to be common beyond the pass from Loja to Zamora, but when searched by the authors in 1999 it could not be found.

ETYMOLOGY: From the Greek, ψευδος- false, a lie, and the Latin *globus*, ball-like, globose, and *flos*, flower, in reference to the fact that this species has been long mistaken for another distinct, rare species from the region.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM PSEUDOKILLIPII Hágsater & L. Sánchez

Plate 781

EPIDENDRUM PSEUDOKILLIPII Hágsater *et* L. Sánchez, *sp. nov.*

Type: COLOMBIA: Risaralda: Municipio de Pueblo Rico, Río Taibá, 1350 m, 13 marzo 1986, ***Rodrigo Bernal, Gloria Galeano, Luz E. Tobón & Luis G. Henao 965.*** Holotype: COL! (Illustration voucher).

Epidendro killipii Hágsater & L. Sánchez simile sed floribus minoribus, sepalis petalisque latioribus, petalis rhombeis ad marginem undulatis, labello reniformi acuto, clinandrio brevi fimbriato recedens.

Hierba epífita, simpodial, cespitosa, de 38 cm de alto. **Raíces** basales, carnosas, delgadas, 0.5-0.8 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos, ancipitosos, sinuosos, 33 x 0.9-1.1 cm. **Hojas** 7, distribuidas a lo largo de los 2/3 apicales del tallo, coriáceas; vainas lateralmente comprimidas, ancipitosas, 2.5-3.5 cm de largo; lámina elíptica, con venas evidentes, ápice desigualmente bilobado, carina dorsal baja, 6-11 x 2.0-2.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, corimbosa, del tallo maduro, florece una sola vez, sésil. **Brácteas florales** mucho más cortas que el ovario. **Flores** 2-3, resupinadas, simultáneas, verdes, fragancia no registrada. **Ovario** no inflado, terete, liso, 25-40 x 2-3 mm. **Sépalos** extendidos, libres, subcoriáceos, glabros, 9-nervaduras principales, las laterales divididas siendo 11-nervados hacia el ápice, margen extendido, entero, 17-18 x 6.5-7.0 mm. **Pétalos** entreabiertos, obovado espatulados, obtusos, membranáceos, 3-nervaduras principales, las laterales muy ramificadas desde la base, margen extendido, algo irregular, 16 x 6.5 mm. **Labelo** unido a la columna, entero, anchamente cordiforme reniforme, base cordada, ápice obtuso, margen entero, subcoriáceo, 13 x 18 mm; bicalloso, los callos pequeños, divergentes; disco liso, carinas ausentes. **Columna** recta, 8.5-9.0 mm de largo. **Clinandrio** corto, fimbriado. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** penetrando 1/2 de la cavidad estigmática. **Nectario** profundo, penetrando más de 3/4 de la longitud del ovario, liso. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb**. **Roots** basal, fleshy, thin. **Stems** simple, cane-like, laterally compressed, ancipitous, sinuate. **Leaves** 7, distributed throughout the apical 2/3 of the stems; sheaths laterally compressed, ancipitose, blade elliptic, with evident veins, apex unequally bilobed, coriaceous, the lower and apical leaves reduced. **Inflorescence** apical, corymbose, flowering only once, sessile. **Flowers** 2-3, resupinate, simultaneous, green. **Ovary** long, terete, smooth. **Sepals** spreading, free, subcoriaceous, glabrous, acute, 9-veined with 2 secondary veins forming 11 veins, margin spreading, entire. **Petals** spreading, obovate-spathulate, obtuse, membranaceous, margin irregular, 3-veined at the base, the lateral veins much branched. **Lip** united to the column, entire, widely cordiform-reniform, base cordate, apex obtuse, subcoriaceous, margin entire; bicallose, the calli small, divergent, disc smooth. **Column** straight. **Clinandrium hood** short, fimbriate. **Rostellum** apical, slit. **Lateral lobes of the stigma** penetrating one half of the stigmatic cavity. **Nectary** penetrating 3/4 of the ovary, smooth.

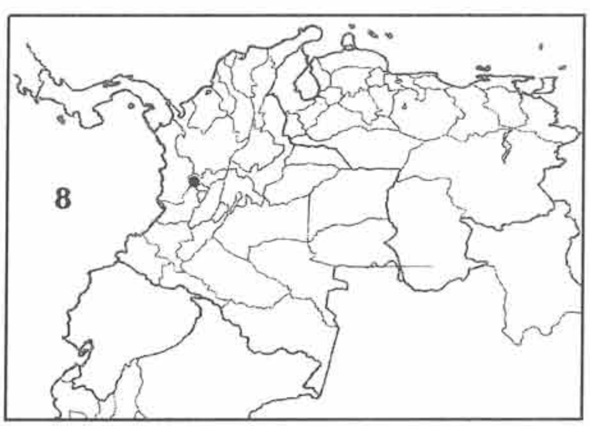
OTHER SPECIMENS: none seen.

DISTRIBUTION AND ECOLOGY: Known only from Colombia, on the western slopes of the Cordillera Occidental, at 1350 m altitude, epiphytic. Flowering in March.

RECOGNITION: *Epidendrum pseudokillipii* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, fleshy, green to yellowish green, rarely white flowers. The new species is recognized by its laterally compressed, ancipitose stems, elliptic leaves with evident veins, the sepals and petals short and wide, the lip widely cordiform-reniform, obtuse, the base deeply cordate, clinandrium hood short, fimbriate. It is somewhat similar to *Epidendrum killipii* which grows to lower altitudes (200-275 m), has few, ovate-elliptic leaves, longer and narrower sepals (24-25 x 6.0-6.5 mm) and petals, petals narrowly rhombic, lip sub orbicular-cordiform, the base shallowly cordate, clinandrium hood prominent, dentate. *Epidendrum andrei* Hágsater & L. Sánchez from Colombia, north of Valle del Cauca, has ancipitose stems, leaves without evident veins, sepals obovate, petals spathulate, rounded, lip obtrapezoid, clinandrium hood erose.

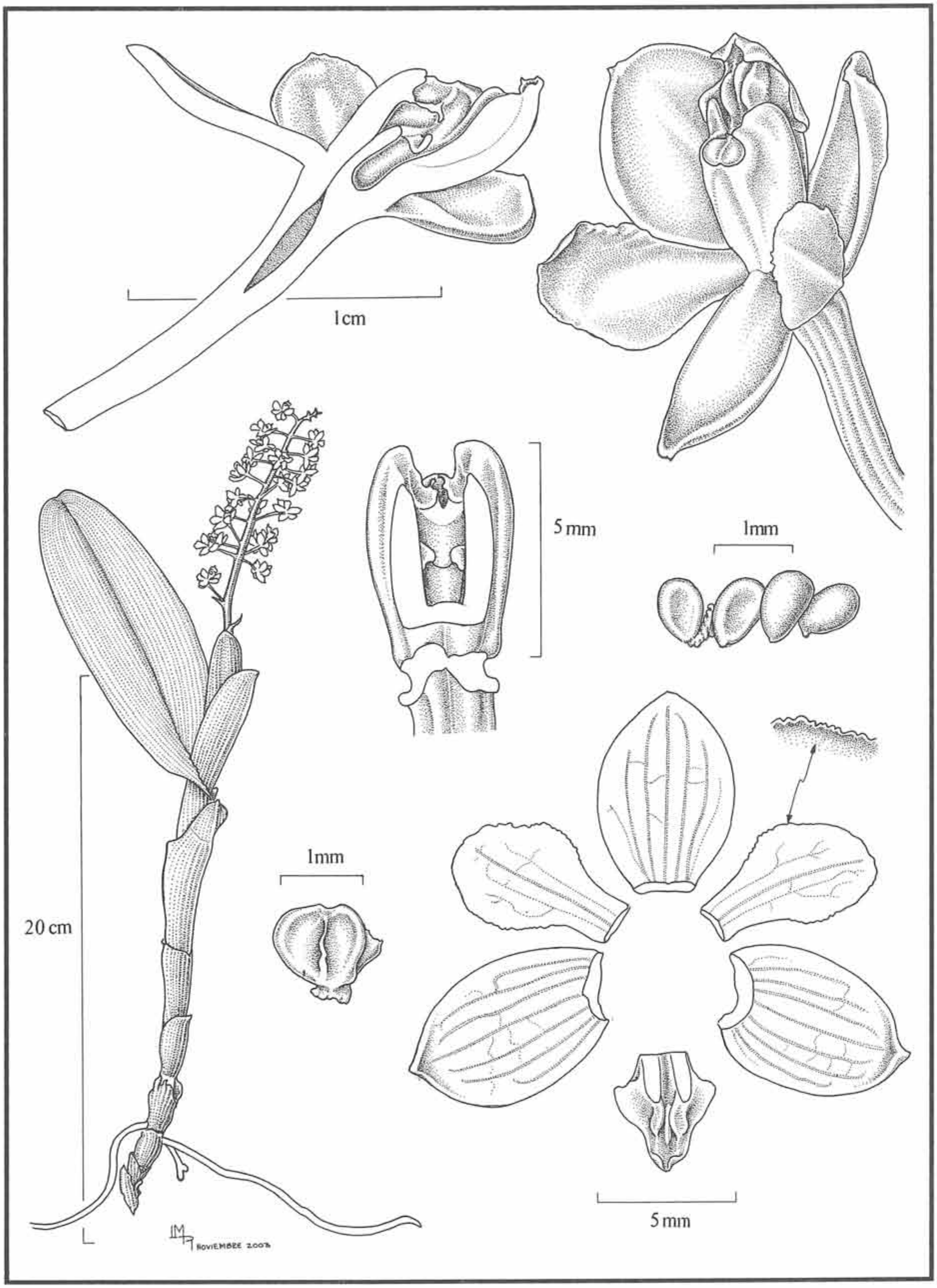
CONSERVATION STATUS: DD (data deficient).

ETYMOLOGY: The epithet refers to the resemblance of this species to *Epidendrum killipii*.



Author: L. Sánchez S. **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM PSEUDOMANCUM Hágsater & L. Sánchez **Plate 782**

EPIDENDRUM PSEUDOMANCUM Hágsater *et* L. Sánchez, *sp. nov.*

Type: COLOMBIA: Nariño: Ipiales, Southeast of Ipiales toward Victoria, 3000-3200 m, 22 February 1978, ***C. A. Luer, J. Luer, A. Hirtz 2721.*** Holotype: SEL! (Illustration voucher).

Epidendro manco Lindl. simile sed major, foliis latioribus, petalis suborbiculari-spathulatis ad marginem crenulatis, labello trulliformi ad apicem apiculato differens.

Hierba epífita, simpodial, cespitosa, erecta, 19-38 cm de alto. **Raíces** basales, carnosas, delgadas, 0.5-1 mm de grosor. **Tallos** tipo caña, rectos, lateralmente aplanados, 9-18 x 0.5-0.8 cm. **Hojas** 2-3, distribuidas en la mitad apical del tallo, erectas; vaina lateralmente comprimida, estriada, 1.5-3.5 cm; lámina ovada elíptica, desigualmente bilobada, con una quilla dorsal, coriácea, margen entero, 7-13 x 3.0-4.8 cm. **Brácteas espatáceas** 1-2, oblongas, ancipitosas, agudas, 4-8 x 3-4 cm. **Inflorescencia** apical, racemosa, erecta, 11-25 cm de largo; pedúnculo terete a ligeramente lateralmente aplanado, recto, no ornamentado. **Brácteas florales** mucho más cortas que el ovario, disminuyendo en tamaño hacia el ápice de la inflorescencia, triangulares, acuminadas, 1-3 mm de largo. **Ovario** terete, no ornamentado, no inflado, 8-10 mm. **Flores** 14-32(50), simultáneas, no resupinadas, sépalos y pétalos pardo rojizos externamente, internamente los sépalos verde olivo y los pétalos verde amarillentos, columna y labelo blanco, el labelo en ocasiones con puntos rosa; fragancia no registrada. **Sépalos** extendidos, ligeramente cóncavos, libres, anchamente elípticos, obtusos, 5-7 nervados, margen entero, 6.5-7 x 5 mm; los **laterales** oblicuos. **Pétalos** extendidos, ligeramente cóncavos, libres, asimétricos, suborbicular espatulados, redondeados, 3-nervados, margen crenulado, 5-6 x 3-4 mm. **Labelo** unido a la columna, reducido, entero, truliforme, apiculado en el ápice, carnoso, margen entero, 4.8-5 x 4-4.2 mm; bicalloso, los callos prominentes y alargados, con una quilla engrosada en medio. **Columna** recta, 5-6 mm de largo; terminando con un par de alas laminares redondeadas. **Clinandrio** corto, entero. **Antera** 4-locular subesférica. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales., caudículas ligeramente más cortas que los polinios. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** de 2/3 de largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, caespitose, erect **herb. Roots** basal, fleshy, thin. **Stems** cane-like, straight, laterally compressed. **Leaves** 2-3, distributed along the apical half of the stem, erect; sheath laterally compressed, striated; blade ovate-elliptic, unequally bilobed, with a dorsal keel, coriaceous, margin entire. **Spathaceous bracts** 1-2, oblong, ancipitose, acute. **Inflorescence** apical, racemose, erect; peduncle terete to somewhat laterally compressed, straight. **Floral bracts** much shorter than the ovary, progressively smaller towards the apex of the raceme, triangular, acuminate. **Ovary** terete, smooth. **Flowers** 14-32(50), simultaneous, non-resupinate, sepals and petals brownish red on the outer side, sepals green-olive and petals green-yellowish internally, column and lip white, lip rarely with pink dots. **Sepals** spreading, slightly concave, free, widely elliptic, obtuse, margin entire, 5-7-veined. **Petals** spreading, slightly concave, free, asymmetrically suborbicular-spathulate, rounded, margin crenulate, 3-veined. **Lip** united to the column, reduced, fleshy, entire, trullate, margin entire; bicallose, the calli prominent and elongate, with a thickened keel in the middle. **Column** straight, ending in a pair of laminar, rounded wings. **Clinandrium hood** short, entire. **Anther** 4-celled, subsphaerical. **Pollinia** 4, obovoid, laterally compressed, subequal. **Rostellum** subapical, slit. **Nectary** short, smooth.

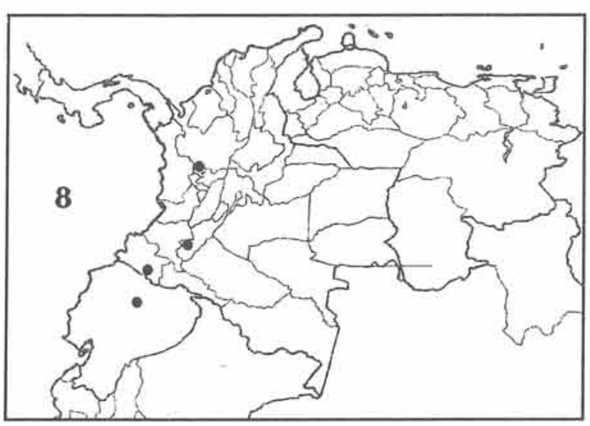
OTHER SPECIMENS: COLOMBIA: Antioquia: Jardín, Quebrada Bonita, 2300-2600 m, 26 V 1983, *Escobar 2731*, SEL! **Huila:** East of the pass, Páramo de Puracé, 14 XI 1982, 2300 m, *Luer 8405*, SEL! **ECUADOR: Napo:** Cosanga, 2000 m, 5 VII 1987, *Dodson 17263*, RPSC! (illustration at AMO).

OTHER RECORDS: COLOMBIA: Cauca u. Antioquia [Antioquia]: auf den Montaña de Caramanda [Caramanta], 2500-2800 m, *Lehmann 530*, K (slide AMO!).

DISTRIBUTION AND ECOLOGY: Known from Colombia and Ecuador. Epiphytic, from 2000 to 3200 m altitude. Flowering from November to July.

RECOGNITION: *Epidendrum pseudomancum* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The species can be recognized by its wide, ovate-elliptic leaves, suborbicular-spathulate, crenulate petals, and a trullate lip. It is similar to *Epidendrum mancum* but this has species has smaller plants, narrower leaves, spathulate petals with an entire to sinuate margin, subquadrate, rounded lip, rarely with minute, subglobose lateral lobes. *Epidendrum pachoi* Hágsater & L. Sánchez from Colombia has 1-2 apical, smaller leaves, elliptic, entire petals, and a three-lobed lip. *Epidendrum microglossum* Schltr. has longer plants, narrower, linear-lanceolate leaves, entire, elliptic-lanceolate petals, and a three-lobed lip. *Epidendrum brachyglossum* Lindl. has linear-lanceolate leaves, linear, entire petals and an obscurely three-lobed lip. *Epidendrum adenoglossum* Lindl. has larger plants, longer, linear-lanceolate leaves, linear-oblanceolate petals and an entire, linear lip.

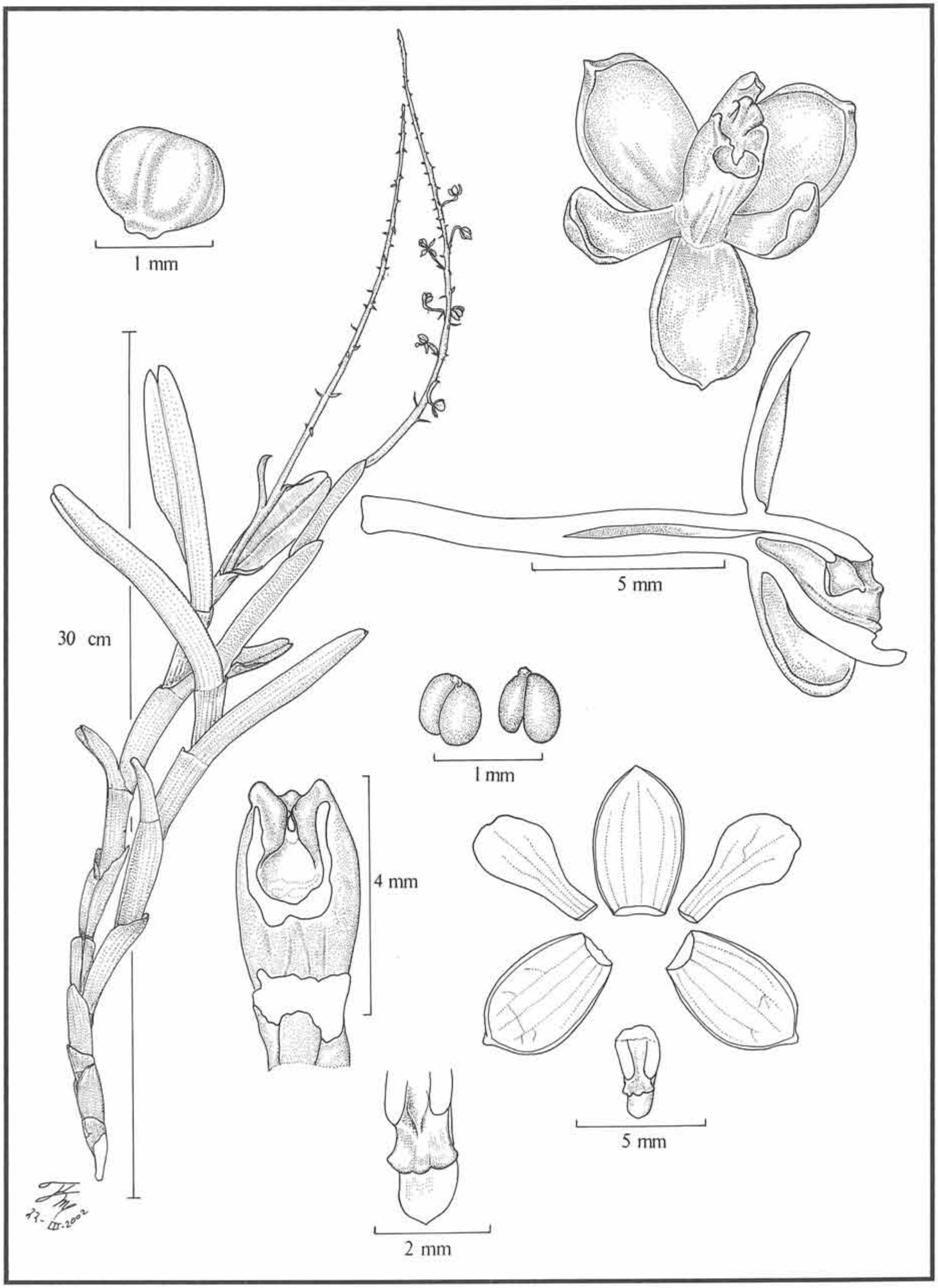
CONSERVATION STATUS: DD. Data deficient.



ETYMOLOGY: In reference to the resemblance of this species with *Epidendrum mancum*.

Author: L. Sánchez S. **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO Apartado Postal 53-123, 11320 México, D.F., MÉXICO



EPIDENDRUM PSEUDOSARCOGLOTTIS Hágsater & Dodson **Plate 783**

EPIDENDRUM PSEUDOSARCOGLOTTIS Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Loja: Road Cuenca to Loja, at the pass between Saraguro and Loja, 3000 m, terrestrial on road embankment, 23 July 1985, ***C. Dodson & A. Embree 16011.*** Holotype: RPSC! (illustration voucher).

Epidendro sarcoglottis Schltr. simile sed foliis elliptico-lanceolatis, floribus majoribus, petalis spathulatis ad apicem orbicularibus, ad marginem integris, labello integro rectangulari apiculato discrepans.

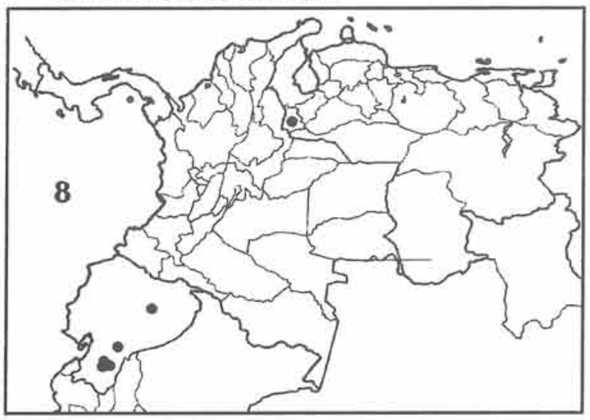
Hierba epífita, simpodial, subcespitosa, erecta, 25-40 cm de alto. **Raíces** basales, carnosas, generalmente delgadas. **Tallos** sencillos, tipo caña, rectos, teretes en la base, lateralmente comprimidos hacia el ápice, 11-16 x 0.3-0.5 cm, el tallo nuevo producido del 2°-3er entrenudo del tallo anterior, a unos 3 cm de la base, cubierto en la zona basal con 1-2 vainas, tubulares, obtusas, papiráceas, 1-3 cm de largo. **Hojas** 2-3, distribuidas en el tercio apical del tallo, suberectas; vaina lateralmente comprimida, ancipitosa, estriada, rugosa; lámina elíptico lanceolada, desigualmente bilobada, margen entero, coriácea, 4-10 x 1.5-2.2 cm. **Bráctea espatácea** 1-2, oblonga, ancipitosa, aguda. **Inflorescencia** apical, racemosa, erecta, 20-27 cm de largo, raquis recto; pedúnculo terete, recto, no ornamentado, 4-10 cm de largo. **Brácteas florales** más pequeñas que el ovario, hasta de la mitad de su longitud, se van reduciendo en longitud siendo las apicales mucho más cortas, triangulares, acuminadas, 1-4 mm de largo. **Ovario** terete, no ornamentado, no inflado, 9.5-10.5 mm de largo. **Flores** 25-40, simultáneas, no resupinadas, sépalos verde oscuro, pétalos verde claro, labelo y columna blanco, ésta última con pequeñas manchas púrpura en el margen del clinandrio, fragancia no registrada. **Sépalos** extendidos, ligeramente cóncavos, libres, obovados, apiculados, margen entero, 5-7.6 x 2.5-4.6 mm; los **laterales** oblicuos. **Pétalos** extendidos, espatulados, lineares hacia la base, orbiculares hacia el ápice, obtusos, margen entero, 4-6.2 x 2.0-2.6 mm. **Labelo** unido a la columna, entero, rectangular, ápice agudo, carnoso, 1.8-2.5 x 1.2-2.0 mm; callo prominente, formando un cojín ámplio, carnoso, cubriendo toda la superficie basal del labelo, flabelado, al extenderse el ápice da la apariencia al labelo de ser trilobado. **Columna** recta, gruesa, 4.0-5.7 mm de largo. **Clinandrio** reducido, entero**. Antera**. subesférica, con un pico truncado al frente, 4-locular. **Polinios** 4, obovados, lateralmente comprimidos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de dos tercios del largo de la cavidad estigmática. **Nectario** sin traspasar el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, subcaespitose **herb. Roots** basal, fleshy, thin, few. **Stems** simple, cane-like, terete at base, ancipitose above. **Leaves** 3-4, distributed throughout the apical third of the stem; sheath ancipitose, striated and rugose; blade elliptic-lanceolate, unequally bilobed, coriaceous, margin entire. **Spathaceous bract** oblong, ancipitose, acute. **Inflorescence** apical, racemose, erect. **Floral bracts** from half to much shorter than the ovary, triangular, acuminate. **Ovary** terete. **Flowers** 25-40, simultaneous, non-resupinate, sepals dark green, petals light green, lip white, column white with some strongly marked purple spots around the margin of the clinandrium. **Sepals** spreading, concave, ovate, obtuse, margin entire; the laterals oblique. **Petals** spreading, spatulate, linear at the base, orbicular above, margin entire. **Lip** united to the column, entire, rectangular, apiculate; callus prominent, forming a wide cushion, fleshy, covering all the base of the lip, flabellate, when spread the apex appears 3-lobed. **Column** straight, thick. **Clinandrium hood** reduced, entire. **Anther** subspherical, with a narrow beak in front. **Pollinia** 4, obovate, laterally compressed. **Rostellum** apical, slit. **Nectary** without penetrating the ovary.

OTHER SPECIMENS: ECUADOR: Beyond the pass, Yangana to Valladolid, 2650 m, IV 1985, D. Dalessandro 396, MO! **Loja:** 15 km south of Yangana on the road Loja-Zumba (Under construction), 2500 m, 24 IX1983, *J. Brandbyge 42297*, AAU!, Road Cuenca to Loja at the pass between Saraguro and Loja, 3100 m, 23 VII 1985, C. H. Dodson & A. Embree 16010, QCNE! RPSC! Quebrada de Sta. Barbara, pres. Chiquiribamba, 18 XI1881, E. Drake 180, P! Saraguro-San Lucas, 2600 m, 9 IX1999, *E. Hágsater & C. H. Dodson 12300*, AMES! AMO! Yangana to Valladolid, km 14.5, 7480 ft., 10 IX1999, *E. Hágsater & C. H. Dodson 12318*, AMES! AMO! SEL! Idem. *12320*, AMO! Saraguro, San Lucas, 10000 ft. [3060 m], 19 VIII 1878, *Lehmann s.n.*, W 69273! Saraguro, San Lucas, 9000 ft. [2754 m], 21 VIII1878, *Lehmann s.n.*, W 69285! Between Tambo Cachiyacu, La Entrada, and Nudo de Sabanillas, 2500-3500 m, *J. A. Steyermark 54466*, AMES! **Morona-Santiago:** Gualaquiza, Area de Bosque Vegetación Protectora Tambillo, 2800 m, 1 XI 2001, *L. Suin & R. Zhunio 683*, QCNE! **Napo:** Quijos, on trial from Cosanga to Rio Aliso, SW of Cosanga, ca. 5 km, 0°30'S 77°52'W, 2130 m, 20 II1978, *J. H. Kirkbride Jr. & H. Chamba R. 4236*, K NY! US!

OTHER RECORDS: ECUADOR: Loja: Saraguro-San Lucas, 2600 m, 9 IX 1999, *E. Hágsater & C. H. Dodson 12300*, AMO (Illustration, flowers in spirit)! Yangana to Valladolid, km 14.5, 7480 ft., 10 IX 1999, *E. Hágsater & C. H. Dodson 12318*, AMO (flowers in spirit)! Idem. *12320*, AMO (Illustration, flowers in spirit)! Saraguro, New road Loja-Saraguro, km. 17, 2600-2650 m, *J. P. Feil 91126*, QCA (slide AMO!) **VENEZUELA: Táchira:** Páramo de Banderas, Alto de la Buena Vista, at about 2650 m, *R. Mejía C.*, (as *Epidendrum mancum* Lindl.) in Dunsterville, G. C. K. & L. A. Garay, Venezuelan Orchids Illustrated, 6: 136. 1976. in Dunsterville, G. C. K. & L. A. Garay, 1979. Orchids of Venezuela. An Illustrated Field Guide. First Edit. 254, and in Romero-González, G. A. & G. Carnevali Fernández-Concha, 2000. Orchids of Venezuela, An Illustrated Field Guide, Second Edit. 260.

DISTRIBUTION AND ECOLOGY: Known from Ecuador and Venezuela. Epiphyte, or terrestrial on road banks, from 2650 to 3100 m altitude. Flowering in July and August.



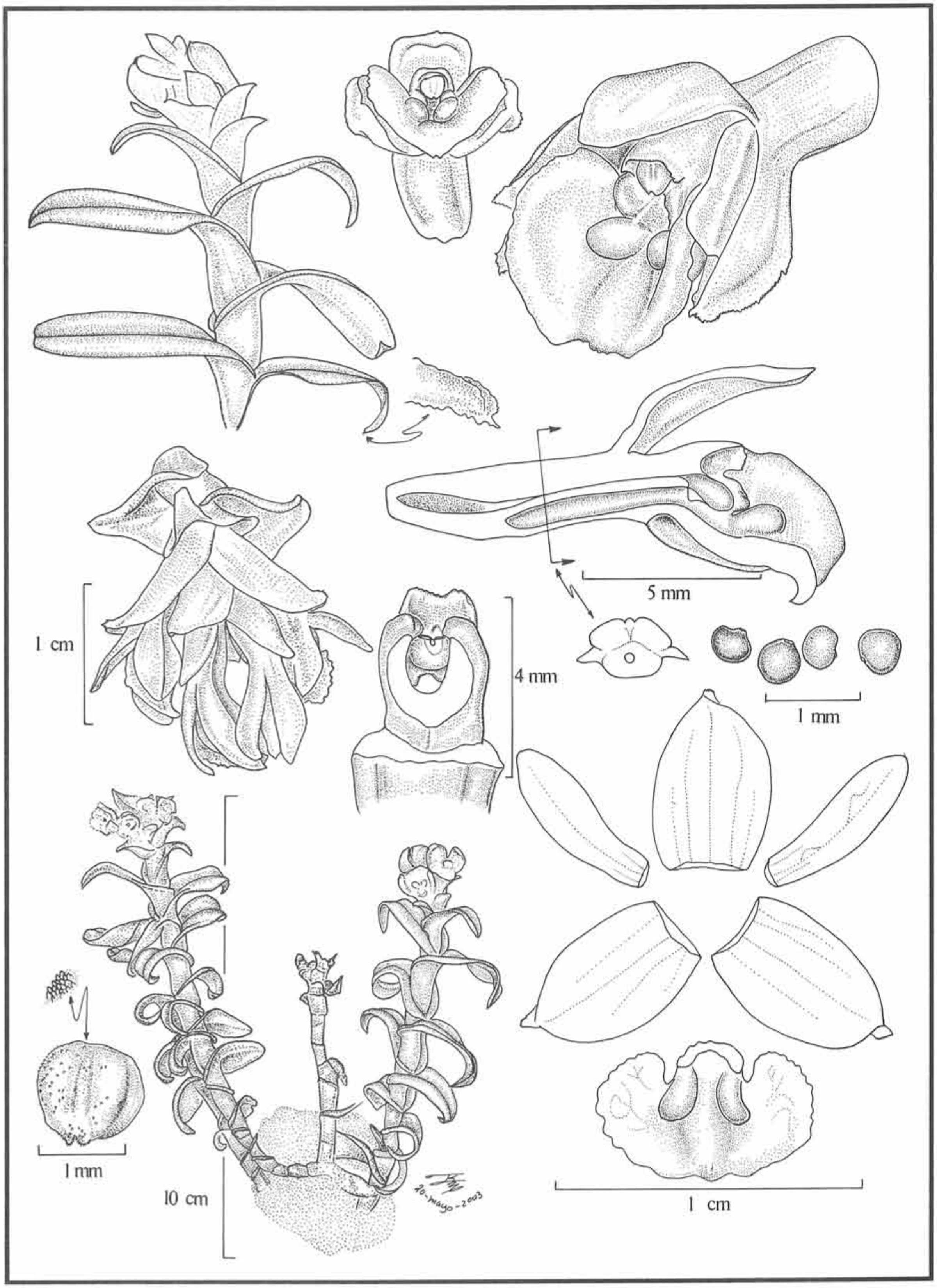
RECOGNITION: *Epidendrum pseudosarcoglottis* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The new species is recognized by the elliptic-lanceolate leaves, sepals and petals 5-7.6 mm long, spatulate petals orbicular towards the apex with margin entire, entire, rectangular lip, apiculate apex with a simple flabellate callus. It is very similar to *Epidendrum sarcoglottis* Schltr. but that species has 8 mm long sepals and petals, oblanceolate petals with the apical margin undulate, and an entire, triangular, acute, claw-like lip. *Epidendrum mancum* Lindl. has smaller plants and leaves, the leaves are wider,1.7-4.0 cm wide, and a reduced, tricallose lip.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to similarity with *Epidendrum sarcoglottis*

Author: L. Sánchez S. **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM PTEROGASTRIUM Hágsater **Plate 784**

EPIDENDRUM PTEROGASTRIUM Hágsater, *sp. nov.*

Type: PERU: Amazonas: Kuelap, hort. Ecuagenera, pressed 10 March 2003, ***E. Hágsater 13870.***
Holotype: AMO! (Illustration voucher).

Epidendro capitellato C. Schweinf. similis sed habitu minore, caespitosi, caulibus crassioribus, foliis minoribus ad apicem paulo decurvis, labello reniformi ad basem cordato, bicalloso.

Hierba epífita, cespitosa, ca. 10 cm de alto. **Raíces** basales, delgadas, blanco verdosas. **Tallos** sencillos, tipo caña, erectos, ancipitosos, 7.0-8.0 x 0.35-0.5 cm. **Hojas** 10-12, distribuidas a lo largo de los tallos, alternas, no articuladas, verdes, concoloras, coriáceas, amplexicaules; vaina tubular, ancipitosa, 4.4-11 x 3.5-5.0 mm; lámina lanceolada ovada, decurva hacia el ápice agudo, con una quilla dorsal baja, margen entero en la base y diminutamente dentado en el ápice, 1.1-3.0 x 0.7-1.0 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, corta, capitada, subsésil, florece una sola vez, 2 cm de largo; pedúnculo muy corto, lateralmente aplanado; cubierto totalmente por 2-5 brácteas semejantes a las florales, dispuestas en espiral, ovadas, agudas, margen entero, amplexicaules, 8 x 10 mm; raquis oculto totalmente por las brácteas florales, ca. de 1 cm de largo. **Brácteas florales** ligeramente más largas que el ovario, anchamente triangular ovadas, agudas, parcialmente conduplicadas, imbricadas, gradualmente más pequeñas hacia el ápice, 5-9 mm de largo. **Flores** 5-7, simultáneas, resupinadas, color blanco verdoso, concoloras, sin fragancia. **Ovario** bialado, delgado, no inflado, no ornamentado, 6.5 mm de largo. **Sépalos** entreabiertos, libres, elípticos, ápice redondeado, con una quilla dorsal prominente, erosa, margen entero, 5.8 x 3.8 mm; el **dorsal** 5-nervado; los **laterales** 4-nervados. **Pétalos** entreabiertos, libres, oblongo oblanceolados, ápice redondeado, 3-nervados, las nervaduras laterales muy cortas, margen entero, 5.8 x 1.0 mm. **Labelo** unido a la columna, entero, cordado reniforme, base profundamente cordada, margen eroso, 4 x 7 mm; bicalloso, los callos prominentes, alargados, redondeados, en el ápice ligeramente divaricado; provisto una quilla ancha y baja, alargada hasta el ápice del labelo, formando un apículo ancho. **Columna** recta, delgada, corta, ápice provisto de un par de lóbulos laterales redondeados, 4 mm de largo. **Clinandrio** prominente, sobrepasando ligeramente el ápice de la columna, margen diminutamente dentado. **Antera** ovoide, con una quilla baja al frente, diminutamente papilosa, 4-locular. **Polinios** 4, lenticulares. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** de la mitad del largo de la cavidad estigmática. **Nectario** penetrando hasta la mitad del ovario, angosto, liso, no inflado. **Cápsula** no vista.

Epiphytic, caespitose **herb. Roots** basal, thin. **Stems** simple, cane-like, erect, ancipitous. **Leaves** 10-12, distributed throughout the stems, alternate, coriaceous, non-articulate, decurved towards the apex, light green; sheath tubular, ancipitous; blade lanceolate-ovate, acute, with a low dorsal keel, margin entire at the base, minutely dentate at the apex. **Inflorescence** apical, short, capitate, subsessile, flowering only once, peduncle short, laterally compressed, covered by 2-5 bracts similar to the floral bracts, spirally arranged, ovate, acute, margin entire, amplexicaul; rachis totally covered by the floral bracts. **Floral bracts** slightly longer than the ovary, widely triangular-ovate, acute, conduplicate at the base, imbricate, progressively smaller. **Flowers** 5-7, simultaneous, greenish white, concolor, without fragrance. **Ovary** two-winged, thin, not inflated, smooth. **Sepals** partly open, free, elliptic, apex rounded, with an erose, dorsal keel, margin entire, the **dorsal** 5-veined, the **laterals** 4-veined. **Petals** partly open, free, oblong-oblanceolate, apex rounded, 3-veined, the lateral veins very short, margin entire. **Lip** united to the column, entire, cordate-reniform, base deeply cordate, margin erose; bicallose, the calli prominent, elongate, rounded at the somewhat divaricate apex, provided with a low, wide keel that reaches the widely apiculate apex. **Column** straight, thin, short, provided with a pair of lateral rounded lobes at the apex. **Clinandrium hood** prominent, slightly surpassing the apex of the column, margin minutely dentate. **Anther** ovoid, with a low keel in front, minutely papillose, 4-celled. **Pollinia** 4, lentil-shaped. **Rostellum** apical, slit. **Nectary** penetrating half the ovary, narrow, smooth.

OTHER SPECIMENS: None seen.

OTHER RECORDS: ECUADOR: Chimborazo: Guamote-Macas, 2800 m, *Sánchez s.n.* (digital photo AMO!)

DISTRIBUTION AND ECOLOGY: Known from the eastern upper slope of the Andes from southern Ecuador and northern Peru, at an altitude of 2600-2800 m. Flowering in March.

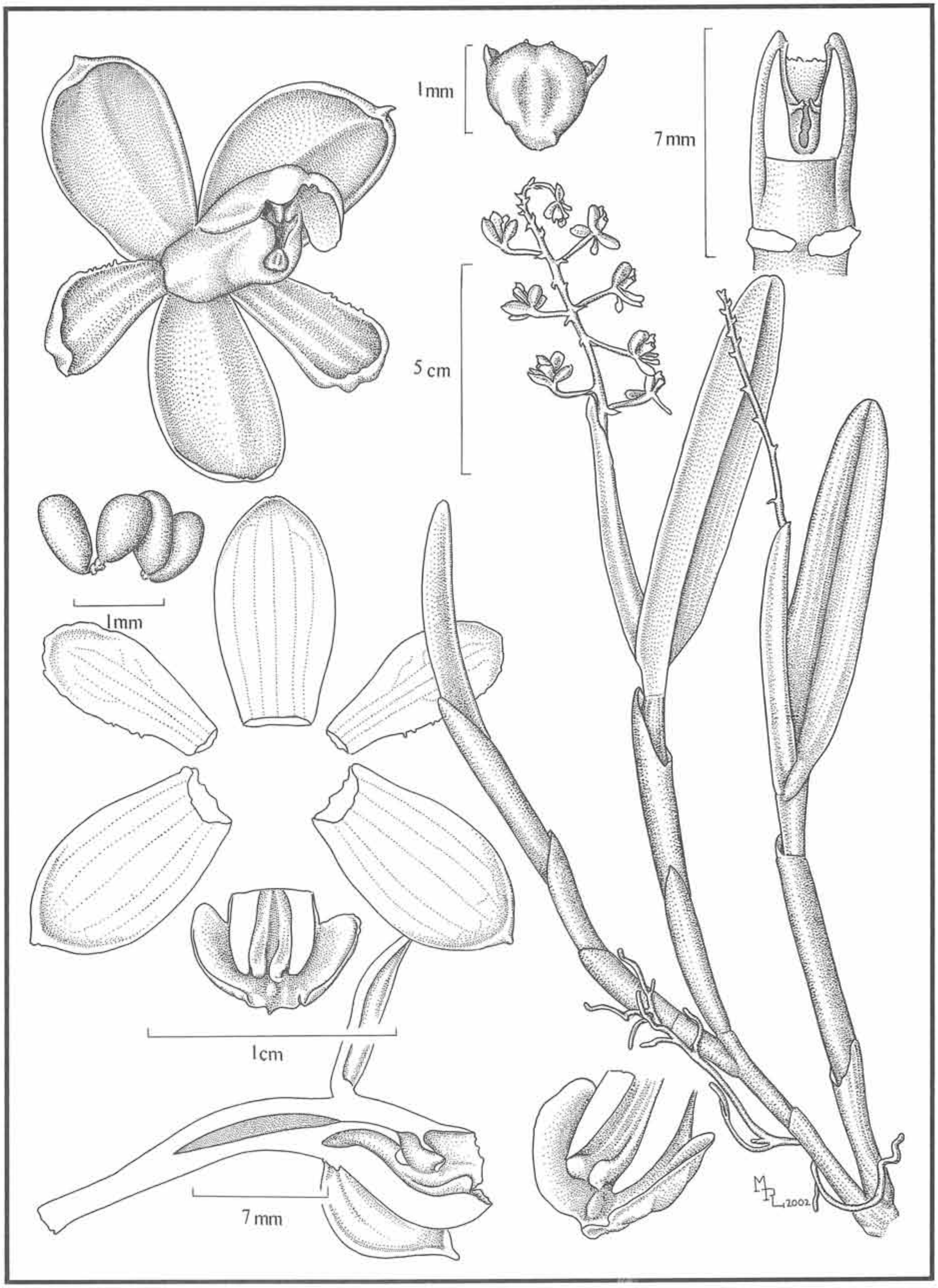
RECOGNITION: *Epidendrum pterogastrium* belongs to the Capitellatum Group which is characterized by the erect, succulent stems with non-articulate leaves, with a compact, sphaerical head of fleshy greenish flowers, without any spathaceous bract, the lip bicallose. The new species is recognized by the ancipitous stems, the fleshy, non-articulate light green leaves decurved towards the apex, and the inflorescence with greenish white flowers with prominent somewhat leaf-like bracts; the lip is cordate-reniform, bicallose, with the margin erose; the habit is immediately recognizable and unlike any other species in the genus. The species is reminiscent of *E. capitellatum* C. Schweinf. which has a repent, creeping habit, with taller, thinner stems, ancipitous sheaths, and simultaneous white flowers with a 3-lobed lip, the smaller midlobe notched and thus bidentate at the apex, the lateral sepals are prominently keeled, the laminar keels continuing down the ovary. It is somewhat similar to *E. schlechterianum* which also has a thickened stem with non-articulate leaves, though a much more compact habit, and a similar cordate-reniform lip though ecallose.



CONSERVATION STATUS: DD. Data deficient. Apparently rare.

ETYMOLOGY: From the Greek πτρον, -wing, and γαστηρ, -belly, in reference to the winged ovary.

Author: E. Hágsater **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM PUNENSE Hágsater & Dodson Plate 785

EPIDENDRUM PUNENSE Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Carchi: above El Pun towards Tulcán, ca. 3200 m, 15 July 1955, ***Erik Asplund 16900.*** Holotype: S! (Illustration voucher).

Epidendro parvilabre Lindl. vegetative simile sed petalis obovatis, labello reniformi ad apicem 2 fissuras ferenti, clinandrio prominente infundibuliformi, floribus non resupinatis recedit.

Hierba epífita, simpodial, subcespitosa, 22-25 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, gruesas, 2-3 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos, 8-11 x 0.3-0.45 cm cubiertos casi en su totalidad por 2 vainas, parcialmente imbricadas, conduplicadas, tubulares, agudas, papiráceas, 4-6.5 x 1.2-1.5 cm. **Hoja** 1, del ápice del tallo, vaina tubular, lateralmente comprimida; lámina, elíptico oblonga, bilobada, margen entero, coriácea, 11-13 x 2.0-2.2 cm. **Bráctea espatácea** 1, persistente, de lados casi paralelos, oblonga, ancipitosa, aguda, 7-8.5 x 1-1.5 cm. **Inflorescencia** apical, racemosa, erecta, 15 cm de largo; pedúnculo cubierto en su totalidad por la bráctea espatácea, inclusive más pequeño que esta, 7.5-8 x 0.2-0.22 cm; raquis lateralmmente comprimido, no ornamentado. **Brácteas florales** mucho más cortas que el ovario, reduciéndose en longitud hacia el ápice, triangulares, agudas, 2-4 mm de largo. **Ovario** ligeramente dilatado hacia el ápice, terete, no ornamentado, 13.5-14.5 mm de largo. **Flores** 16-18, simultáneas, no resupinadas, sépalos y pétalos de color pardo rojizo oscuro, labelo amarillo pálido, con puntos violeta alrededor de los polinios, fragancia no registrada. **Sépalos** extendidos, libres, obovados, 5-nervados, margen entero, 8.3-8.5 X 4.9-5.2 mm; el **dorsal** con el ápice obtuso; los **laterales** mucronados. **Pétalos** extendidos, obovados, obtusos, 3-nervados, margen irregularmente ondulado, 7.8-8.0 x 3.5-3.7 mm. **Labelo** unido a la columna, laminar, entero, reniforme, con dos hendiduras cortas en el ápice, apiculado, 4.8-5.0 x 6.5-6.8 mm; bicalloso, los callos carnosos, extendiéndose hasta más de la mitad del disco, con una quilla engrosada, corta, al frente de los dos callos. **Columna** recta, gruesa, 6.3-6.5 mm de largo. **Clinandrio** prominente, en forma de embudo, margen finamente eroso. **Antera** subesférica, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, caudículas granulosas, mucho más cortas que los polinios. **Rostelo** hacia la mitad de la columna, hendido. **Lóbulos laterales del estigma** de 1/3 de largo de la cavidad estigmática. **Nectario** traspasando ligeramente el perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, subcaespitose **herb. Roots** basal, fleshy, thick. **Stems** simple, cane-like, fleshy, thickened, laterally compressed, nearly completely covered by 2 sheaths. **Leaf** 1 apical, oblong-elliptic, bilobed, coriaceous, margin entire. **Spathaceous bract** 1, oblong, acute, ancipitose. **Inflorescence** apical, racemose, erect, peduncle without bracts. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** terete, slightly thickened near the apex. **Flowers** 16-18, simultaneous, non resupinate, sepals and petals dark reddish brown, lip pale yellow with violet dots around the pollinia. **Sepals** spreading, free, obovate, 5-veined; the **dorsal** obtuse; the **laterals** mucronate. **Petals** spreading, obovate, obtuse, margin undulate, 3 veined. **Lip** united to the column, entire, reniform, with a pair of apical incisions, apiculate; bicallose, the calli fleshy, extending to the middle of the disc or more. **Column** straight, thick. **Clinandrium hood** long, funnel-shaped, margin minutely erose. **Anther** subspherical, 4-celled. **Pollinia** 4, obovoid, laterally compressed, caudicles granulose, much shorter than the pollinia. **Nectary** slightly penetrating the ovary.

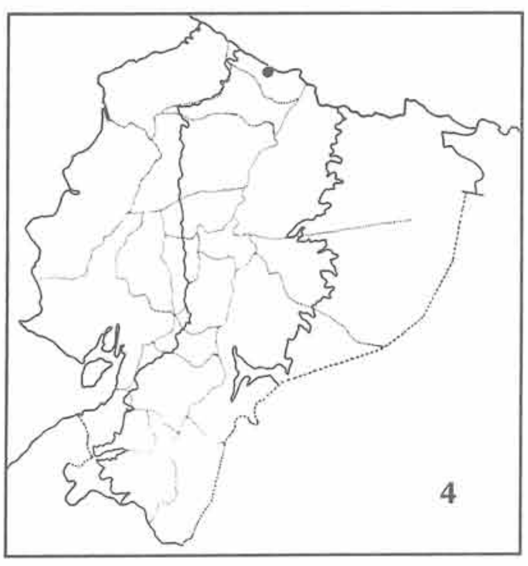
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type locality. Epiphytic, 3200 m altitude. Flowering in July.

RECOGNITION: *Epidendrum punense* belongs to the Mancum Group and Subgroup, which is characterized by the sympodial growth, narrow spathaceous bracts with parallel sides, erect raceme with non-resupinate flowers and a generally reduced, fleshy lip. The new species can be recognized by the solitary leaf 11-13 x 2.0-2.2 cm, single, ancipitose spathaceous bract covering the whole peduncle, obovate petals with the margin undulate and laminar, entire, reniform lip with a pair of incisions at the apex. Vegetatively it is similar to *Epidendrum parvilabre* but this species has 1-2 spathaceous bracts, a longer inflorescence, resupinate flowers, oblong to oblanceolate petals with an entire margin and 3-lobed lip. *Epidendrum mancum* Lindl., has smaller plants, leaves and flowers, wider leaves and a reduced, entire, lip.

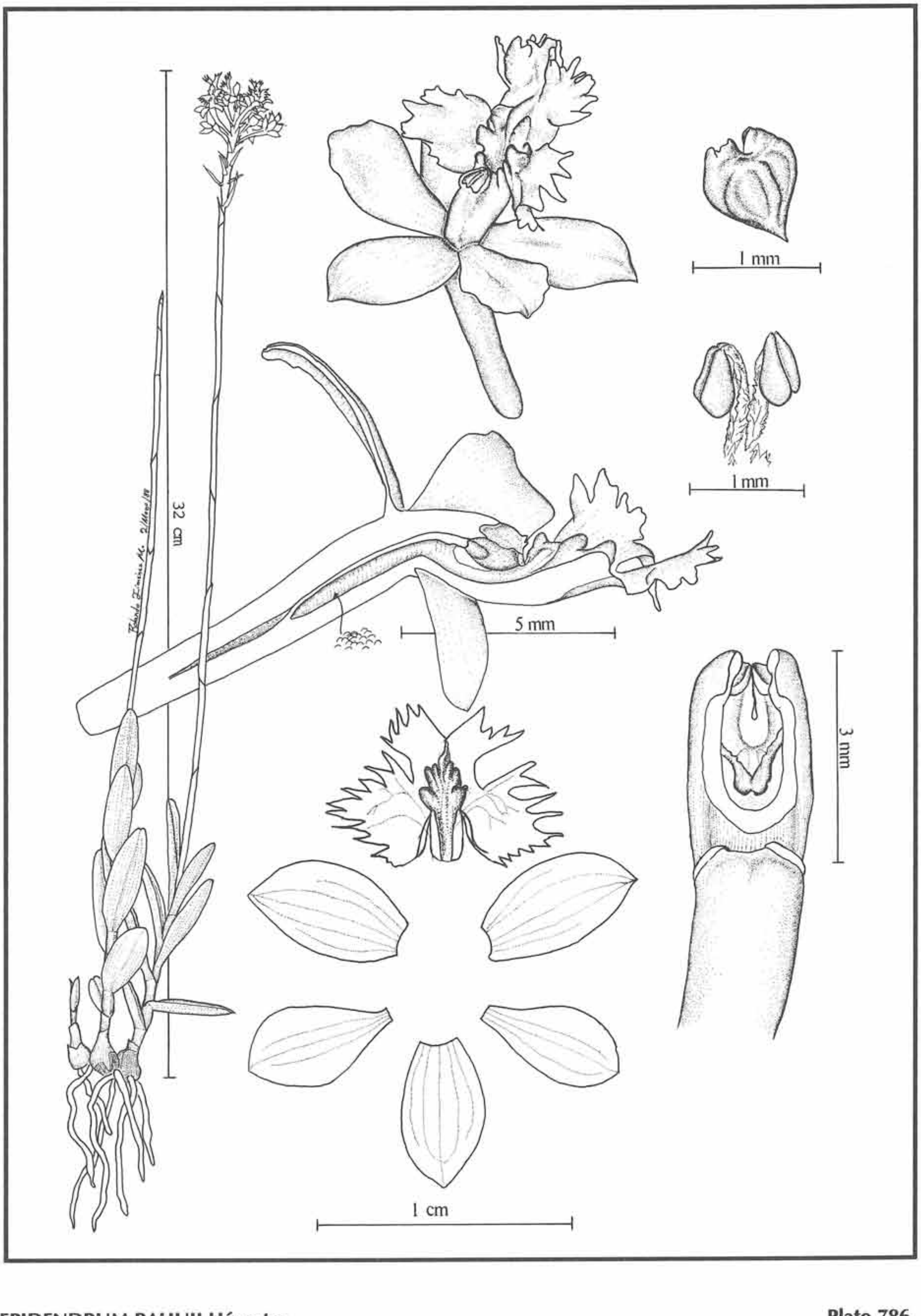
CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: In reference to the "El Pun" Ecuador, where the type specimen was collected.



Author: L. Sánchez S. **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM RAHUII Hágsater

Plate 786

EPIDENDRUM RAUHII Hágsater, *sp. nov.*

Type: PERU: [Cajamarca: Cutervo:] Forest near Huambos, 2300 m col. 26 June 1982, *Werner Rauh 24243*, cultivated in Heidelberg and Mexico City, prepared as ***E. Hágsater 6875***, 6 May 1988, (Illustration voucher). Holotype: USM! Isotypes: AMO! COL! HEID! MO! Clonotypes: 18 May 1988, AMES! AMO! F! QCNE! SEL! 12 Oct. 1992 K! NY!

Epidendro gracilicauli Rchb.f. & Warsc. simile sed floribus albis interdum cum colore roseo suffultis, segmentis floralibus latioribus, caulibus ad basem sphaericis divergens.

Hierba litófita, cespitosa, 26-35 cm de alto incluyendo la inflorescencia. **Raíces** producidas en la base de los tallos, delgadas, blanquecinas, carnosas, 1.5-2.5 mm de grosor. **Tallos** sencillos, tipo caña, erectos, teretes, engrosados en la base formando una pequeña esfera, 5-13 x 0.2-0.7 mm, la base esférica 7-12 mm de diámetro. **Hojas** 3-9, distribuidas a lo largo de todo el tallo; vaina tubular, lisa, escariosa al secar, 1.2-1.6 cm de largo; lámina foliar articulada, elíptico lanceolada, ápice bilobado, margen entero, coriácea, lisa, verde, 2.7-4.9 x 0.8-1.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, produciendo nuevos racimos del pedúnculo viejo, 15-25 cm de largo; pedúnculo largo, terete, erecto, 10-38 cm de largo, cubierto completamente por vainas tubulares, imbricadas, agudas, las apicales acuminadas, escariosas, 1.5-5.3 cm de largo; raquis 1.5-6.5 cm de largo, no ornamentado. **Flores** numerosas, sucesivas, unas 3-15 abiertas a la vez, no resupinadas, fragancia ausente, blancas a ligeramente teñidas de rosa o violeta, con los callos amarillos. **Brácteas florales** mucho más cortas que el ovario, las basales mucho más grandes que las apicales, triangulares, agudas a acuminadas, 1-6 mm de largo. **Ovario** pedicelado, recto, no inflado, de sección circular, no ornamentado, recto, 0.5-0.8 cm largo. **Sépalos** extendidos, libres, anchos, elípticos, glabros, membranáceos, 5-nervados, margen entero; el **dorsal** 4.5-8 x 2.5-3 mm; los **laterales** ligeramente oblicuos, 6.5-9 x 3-4 mm. **Pétalos** extendidos, libres, glabros, membranáceos, obovados, obtusos, 3-nervados, margen entero, 6-8.5 x 3.5 mm. **Labelo** unido a la columna, trilobado, truncado en la base, lóbulos laterales más o menos del mismo tamaño del medio, 6.5-7 x 9-10 mm; **lóbulos laterales** suborbiculares, profundamente laciniados, 3 x 3 mm; **lóbulo medio** obcuneado, bilobado, los lóbulos subcuadrados, divergentes, margen apical laciniado, 3 x 5.5; callo masivo cubriendo el disco, engrosado, formado por un par de tubérculos laterales, una masa 5-tuberculada terminada en una quilla corta. **Columna** ligeramente arqueada, corta, gruesa, los lados más largos que el dorso, y terminados a cada lado en un par de tubérculos algo curvados hacia arriba, 3 mm de largo. **Clinandrio** reducido, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad del largo de la cavidad estigmática. **Nectario** profundo, penetrando 1/2 de pedicelo, ornamentado con numerosas papilas semiesféricas. **Antera** ovoidea, 4-locular. **Polinios** 4, angostamente obovoides, los exteriores ligeramente más pequeños; **caudículas** suaves, en forma de tejas, más largas que los polinios; **viscidio** semilíquido, transparente. **Cápsula** no vista.

Short lithophytic, caespitose **herb. Stems** cane-like, terete, the base subspherical. **Leaves** 3-9, elliptic-lanceolate, apex bilobed, coriaceous. **Inflorescence** apical racemose, erect, with a long peduncle, completely covered by tubular, imbricated sheaths. **Flowers** successive, about 3-15 open at one time, non-resupinate, white to somewhat tinged pink or violet, callus yellow. **Floral bract** much shorter than the ovary, triangular, acute to acuminate. **Ovary** straight, not inflated. **Sepals** wide, elliptic, obtuse,5-veined, margin entire. **Petals** obovate, obtuse, margin entire, 3-veined, somewhat narrower than the sepals. **Lip** 3-lobed, truncate, lateral lobes suborbicular, apical margin deeply lacerate, about the same size as the apical lobe which is deeply bilobed, divergent, the apical margin lacerate; callus massive, covering the disk, thickened, with a pair of lateral tubercles, and the main body 5-tuberculate, the apical forming a short keel. **Column** arched, thick, the sides ending in a pair of tubercles, long and arched upwards at the apex. **Clinandrium hood** reduced, entire. **Nectary** penetrating half of the ovary, ornamented with numerous papillae. **Pollinia** 4, obovate, the caudicules soft, like stacked roof tiles.

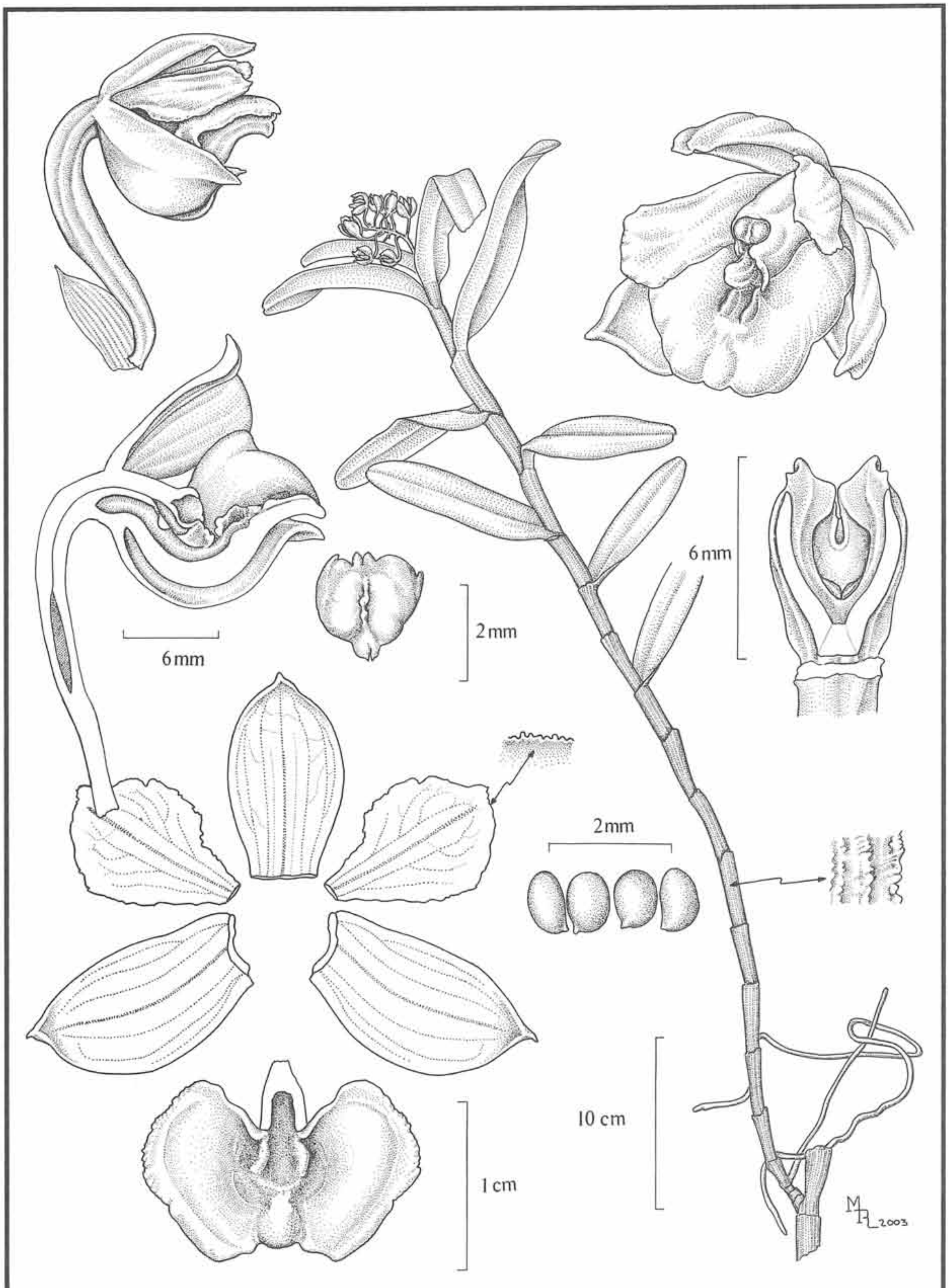
OTHER SPECIMENS: PERU: Cajamarca: Cerros de Cutervo, 2500-2600 m, 1 VIII 1946, *Ferreyra 859*, AMES! Cutervo, 23 V 1965, *López 5361*, AMES! Quilimbach, 3 VII 1975, *Sánchez Vega 1670*, F, xerox at AMO! Chota-Tacabamba km 6-8, 2650 m, 20 II 1983, *Smith 3609*, F! MO! **Lambayeque:** Uyurpampa, 12 XII 1992, *Llatas 3213*, AMO!

DISTRIBUTION AND ECOLOGY: Known only from northern Peru, in the departments of Cajamarca and Lambayeque at 2300-2650 m altitude. Flowering in May to December.

RECOGNITION: *Epidendrum rauhii* belongs to the Secundum Group and is recognized by the small plants with the base of the stems thickened and subsphaerical and the small, non-resupinate, white flowers with a large yellow, 7-tuberculate callus on the disc. It is similar in size to *Epidendrum gracilicaule* which was described from Peru without locality, which has orange-yellow flowers and the sepals and petals somewhat narrower; the size and base of the stem not known.



ETYMOLOGY: In honor of Werner Rauh, from the botanical garden in Heidelberg, who collected South American plants and Bromeliads in particular. One of his collections cultivated in Heidelberg and later in Mexico City has been used to prepare the type specimens.



EPIDENDRUM SAGASTEGUII Hágsater & E. Santiago

Plate 787

EPIDENDRUM SAGASTEGUII Hágsater *et* E. Santiago, *sp. nov.*

Type: PERÚ: Piura: Huancabamba: Canchaque-Minas Turmalina, 23 Julio 1975, 2200 m, ***A. Sagástegui A., J. Cabanillas S., & O. Dios C. 8276.*** Holotype: AMO! (Illustration voucher). Isotypes: NY! SEL!

Epidendro renilabio Schltr. simile sed floribus ex basi versus inflorescentiae apicem aparientibus, floribus leviter minoribus, petalis ad marginem profunde erosis discrepans.

Hierba litófita, erecta, ramificada en plantas maduras, de 200 cm de alto. **Raíces** en el tallo principal no vistas, en las ramas una a varias raíces distribuidas hasta en el tercio basal, gruesas, sencillas, carnosas, blancas, 3-5 mm de grosor. **Tallos** ramificados, tipo caña, teretes abajo, algo lateralmente aplanados hacia el ápice, rectos, el principal no visto, las ramas 36-53 x 0.5-1.6 cm. **Hojas** en el tallo principal no vistas, 10-13 en las ramas, distribuidas en las 3/4 partes apicales del tallo, las basales generalmente caedizas, alternas, articuladas; vaina tubular a ligeramente infundibuliforme en seco, finamente estriada, rugosa, 1.5-4.5 x 0.5-1.6 cm; lámina oblonga a angostamente elíptica, ápice bilobado, con una quilla dorsal baja, coriácea, margen entero, 5.2-13.5 x 2-3.4 cm. **Inflorescencia** apical, racemosa, arqueada, densa, 5.5-6 cm de largo; pedúnculo delgado, corto, 2.3-2.5 cm de largo; provisto en la parte media de 2 brácteas triangulares, agudas, abrazadoras, 4-5 mm de largo; raquis recto, 3.5-4 cm de largo. **Bráctea espatácea** ausente. **Flores** 20-25, simultáneas, aunque algunas apicales presentes aún en botón floral, abriendo de la base hacia el ápice de la inflorescencia, resupinadas, verdosas; sin datos de fragancia. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 2-3 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, arqueado en el ápice, 15-22 mm de largo. **Sépalos** entreabiertos, libres, obtusos, diminutamente apiculados, subcoriáceos, margen extendido y entero; el **dorsal** obovado, 5-nervados, las nervaduras muy ramificadas dando la apariencia de ser 7-nervados, 11-12 x 6.5-7.0 mm; los **laterales** elípticos, ligeramente oblicuos, 4-nervados, las nervaduras ramificadas desde la base dando la apariencia de ser 7-nervados, 13-14.5 x 7.5-7.8 mm. **Pétalos** entreabiertos, libres, anchamente obovados, unguiculados, ápice redondeado, 3-nervados, margen extendido, eroso, 11.0-11.5 x 7.8-8.0 mm. **Labelo** unido a la columna, reniforme, base profundamente cordada, ápice emarginado y anchamente mucronado, margen crenado en la mitad basal a entero en la mitad apical, 11 x 17 mm; bicalloso, los callos laminares, delgados, con un par de quillas radiantes laterales, y con una cavidad intercallosa, de paredes carnosas, que nace desde la base del labelo y termina cerca de la mitad de la lámina, justo donde se origina una quilla prominente, ancha, roma y lisa. **Columna** recta, corta, gruesa, con el clinandrio apical dirigido hacia arriba, 5 mm de largo. **Clinandrio** corto, entero. **Antera** ovoide, con una quilla central ligeramente sinuosa, 4-locular. **Polinios** 4, obovoides, lateralmente aplanados. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/4 del largo de la cavidad estigmática. **Nectario** poco profundo, apenas penetrando el ovario, no inflado, no ornamentado. **Cápsula** no vista.

Lithophytic, erect, branching **herb. Roots** on the branches, one to many, distributed along the basal third, simple, thick, fleshy, white. **Stems** branching, cane-like, terete below, somewhat laterally compressed above. **Leaves** 10-13 on the branches, distributed along the apical 3/4, alternate, articulate; sheath tubular, somewhat infundibuliform when dry, minutely striated and rugose; blade oblong to narrowly-elliptic, apex bilobed, with a low dorsal keel, coriaceous, margin entire. **Inflorescence** apical, racemose, arching, dense; peduncle thin, short, provided at the middle with 2 triangular, acute bracts. **Flowers** 20-25, simultaneous, though the apical ones may be still in bud when most are open, open from the base of the inflorescence towards the apex, resupinate, greenish. **Floral bracts** much shorter than the ovary, triangular, acute. **Ovary** terete, thin, smooth, arched at the apex. **Sepals** partly spreading, free, obtuse, minutely apiculate, subcoriaceous, margin spreading, entire; **dorsal** obovate, 5-veined, branched, thus appearing 7-veined; the **laterals** elliptic, slightly oblique, 4-veined, branched and thus appearing 7-veined. **Petals** partly spreading, free, wide-obovate, unguiculate, apex rounded, 3-veined, margin spreading, erose. **Lip** united to the column, reniform, base deeply cordate, apex emarginate and widely mucronate, basal margin crenate, apical margin entire; bicallose, the calli laminar, thin, with a pair of radiating lateral keels, and a central longitudinal cavity, extending from the base of the lip to the middle, where it ends in a couple of fleshy-thickened margins and turns into the central, fleshy, low, rounded keel. **Column** straight, short, thick, the apical clinandrium hood upturned. **Clinandrium hood** short, entire. **Anther** ovoid, with a slightly sinuous central keel, 4-celled. **Pollinia** 4, obovoid, laterally compressed. **Rostellum** apical, slit. **Nectary** barely penetrating the apex of the ovary, smooth.

OTHER SPECIMENS: PERU: Piura: Huancabamba: Canchaque, 2150 m, 12 IX 1964, *Hutchison 6560*, UC! Canchaque, 2300 m, 13 IX 1964, *Hutchison 6571*, UC!



DISTRIBUTION AND ECOLOGY: Known only from western slopes of the Andes in northern Peru, at 2150-2200 m altitude, lithophytic on a rocky slope. Flowering in July-September.

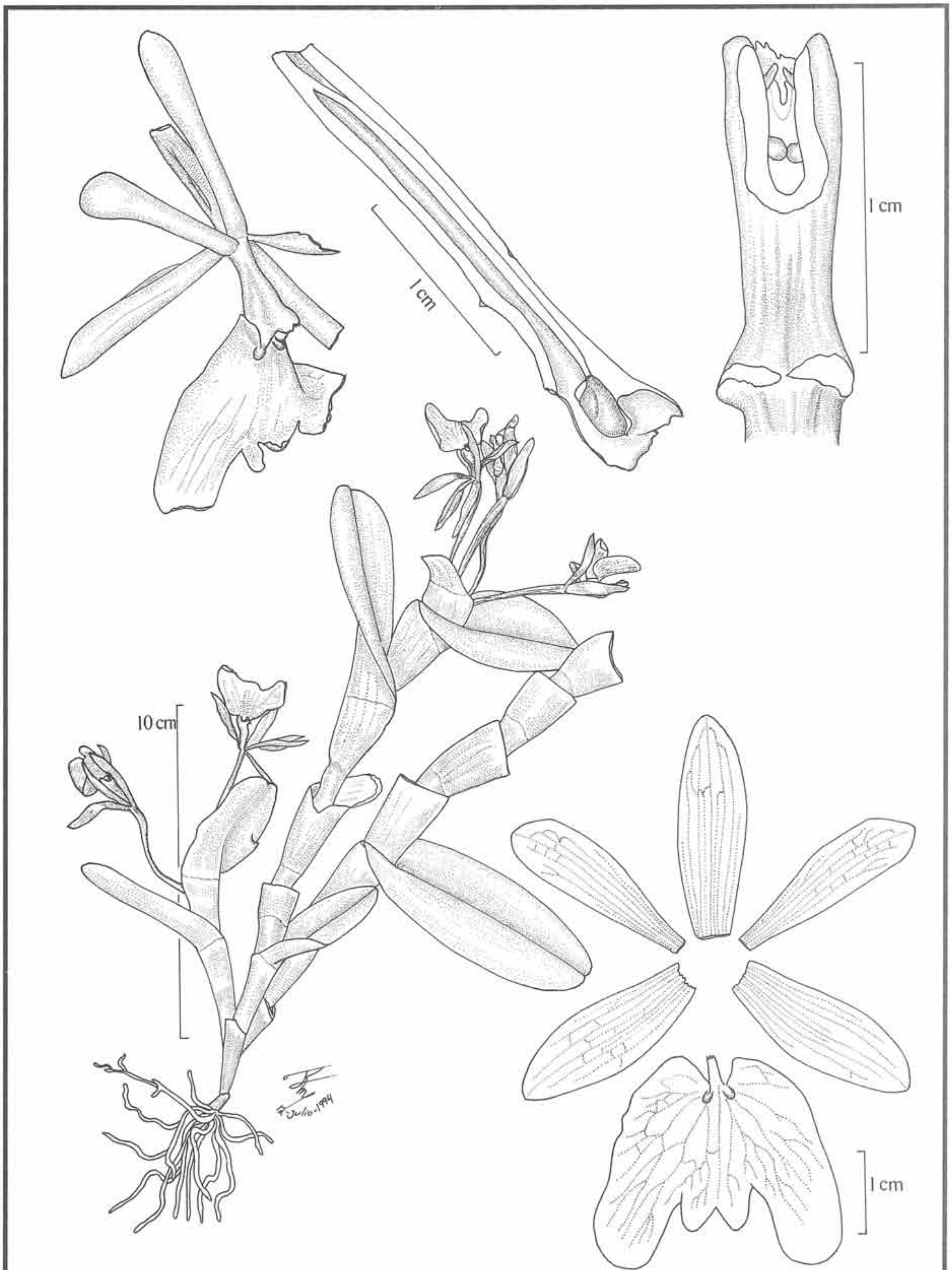
RECOGNITION: *Epidendrum sagasteguii* belongs to the Cernuum Group, Renilabium Subgroup which is characterized by the tall plants, monopodial habit, large, bilobed leaves, racemose inflorescence, entire to bilobed lip with a channel at the base of the lip between the calli. The new species is recognized by the flowers which open from the base of the inflorescence towards the apex, the sepals are somewhat shorter, and the petals have a deeply erose margin. *Epidendrum renilabium* produces the flowers from the apex of the inflorescence backwards, concolor green flowers, the sepals are 14-18 mm long, the petals have an entire margin. *Epidendrum pazii* Hágsater has flowers opening from the base towards the apex, petals elliptic-obovate, obtuse, with entire margins. *Epidendrum renilabioides* Hágsater & Dodson has white to bronzy greenish flowers, opening from the apex towards the base of the inflorescence, the lip reniform, apiculate, with a "Y" shaped callus.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: Named in honor of Abundio Sagástegui Alba (1932-), of Peru, who has collected extensively in northern Peru in the second half of the XX century, and who collected the type.

REFERENCES: Schweinfurth, C., 1970. As *Epidendrum renilabium*, in Orchids of Peru, Supplement, **Fieldiana: Botany** 33: 42.

Authors: E. Hágsater & E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM SOLOMONII Hágsater & L. Sánchez

Plate 788

EPIDENDRUM SOLOMONII Hágsater *et* L. Sánchez, *sp. nov.*

Type: BOLIVIA: La Paz: Nor Yungas: 4.5 km below Yolosa, then 13.7 km W on road up Rio Huarinilla, 1200 m, 25 January 1983, ***James C. Solomon 9395.*** Holotype: NY! (Illustration voucher). Isotype: MO!

Epidendro benettii Dodson simile sed plantis et floribus minoribus, sepalis petalisque ad apicem rotundatis, petalis spathulatis, labello lobulis lateralibus rotundatis, lobulo medio bilobato differens.

Hierba epífita, cespitosa, 14-25 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, filiformes, 0.5-1 mm de grosor. **Tallos** sencillos, tipo caña, ancipitosos, ligeramente flexuosos, 6-18 x 0.9-1.4 cm. **Hojas** (2) 3-5, equidistantes a lo largo del tallo; vaina foliar ancipitosa, lisa, 1.5-2.5 cm de largo; lámina foliar elíptica, ápice retuso, carina dorsal ausente, verde, coriácea, 4-7 x 1.5-2.7 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical en el tallo maduro, florece una sola vez, subsésil, pedúnculo muy reducido. **Brácteas florales** mucho más pequeñas que el ovario. **Flores** 2-4, simultáneas, resupinadas, amarillo pálido. **Ovario** no inflado, terete, no ornamentado, 40-45 mm de largo. **Sépalos** subcoriáceos, glabros, libres, extendidos, elípticos, redondeados, margen entero, revoluto, 7-nervados, 24-28 x 8-8.5 mm; los laterales ligeramente oblicuos. **Pétalos** extendidos, espatulados, redondeados, margen entero, 5-nervados, 23-25 x 7-7.5 mm. **Labelo** unido a la columna, base cordada, trilobado, 15-22 x 21-25 mm; bicalloso, los callos pequeños, subglobosos; lóbulos laterales, angostamente ovados, redondeados, margen entero, 8-8.5 x 20-24 mm; lóbulo medio rectangular, bilobado, formando dos lóbulos, 5-5.5 x 8-8.4 mm. **Columna** recta, inflada hacia el ápice, 11-12 mm de largo. **Clinandrio** prominente, cónico, dentado. **Antera** no vista. **Polinios** no vistos. **Rostelo** no visto. **Lóbulos laterales del estigma** prominentes de 1/2 de la cavidad estigmática. **Nectario** no visto. **Cápsula** no vista.

Epiphytic, caespitose **herb**. **Stems** cane-like, ancipitose. **Leaves** (2) 3-5, elliptic, retuse, green, coriaceous. **Spathaceous bract** absent. **Inflorescence** apical, flowers only once, subsessile, peduncle reduced. **Floral bracts** smaller than the ovary. **Flowers** 2-4, simultaneous, resupinate, pale green. **Ovary** inflated, terete, unornamented. **Sepals** subcoriaceous, glabrous, free, spreading, elliptic, rounded, margin entire, revolute, 7-veined. **Petals** spreading, spathulate, rounded, margin entire, 5-veined. **Lip** united to the column, base cordate, 3-lobed; bicallose, the calli small, subglobose, lateral lobes narrowly ovate, rounded, entire; midlobe rectangular, bilobed. **Column** straight, inflated at the apex. **Clinandrium hood** prominent, conical, dentate.

OTHER SPECIMENS: BOLIVIA: La Paz: Yungas, 500-1000 m, *Vásquez 378,* LPB.

DISTRIBUTION AND ECOLOGY: Known only from western Bolivia, near the Peruvian border. Epiphyte, 500-1200 m altitude, in moist forest. Flowering in January.

RECOGNITION: *Epidendrum solomonii* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish-green rarely white flowers. The new species is recognized by its tall plants, elliptic, rounded sepals, wide, spathulate, rounded, 5-veined petals, the lip without prominent thickened veins, lateral lobes oblong, entire and the bilobed midlobe. It is very similar to *Epidendrum bennettii* which has pale green flowers, oblong, truncate, mucronate sepals, acuminate, 3-veined petals, a 3-lobed lip with prominent thickened veins, the lateral lobes ovate, sinuate, and the midlobe truncate. *Epidendrum apaganum* Mansf. has smaller plants and flowers, acute sepals and petals, 5-veined sepals, 3-veined petals, and the midlobe of the lip triangular, emarginate with prominent thickened veins. *Epidendrum althausenii* A. D. Hawkes widespread in the Amazon basin has shorter plants, 1 to rarely 2 flowers, linear, 3-veined petals, and a 3-lobed lip, subquadrate when spread, without prominent thickened veins.

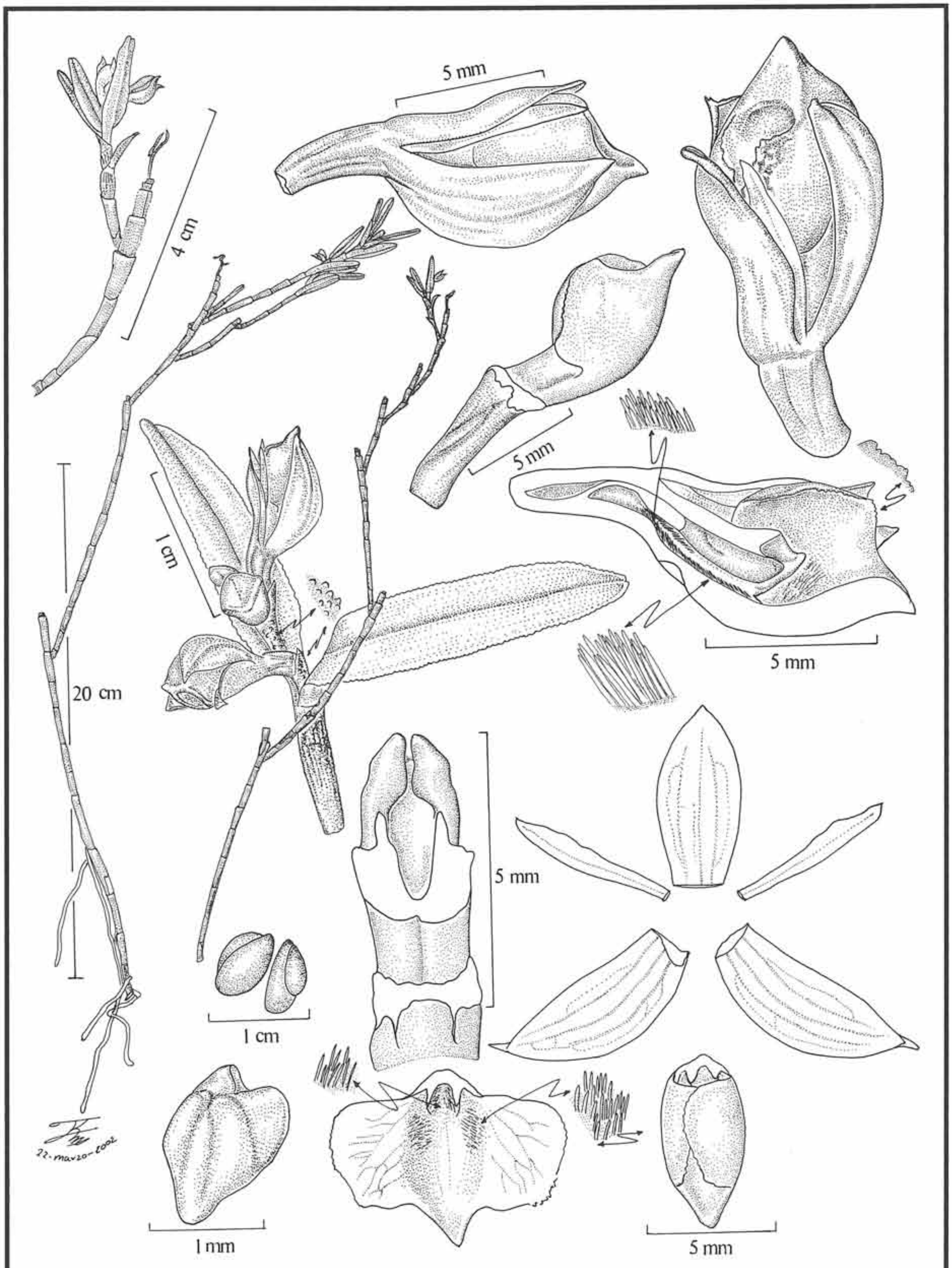
CONSERVATION STATUS: DD: Data deficient.

ETYMOLOGY: In honor of James C. Solomon, curator of the herbarium at the Missouri Botanic Garden who collected the type specimen.



Author: L. Sánchez S. **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM SPASMOSUM Hágsater & Dodson

Plate 789

EPIDENDRUM SPASMOSUM Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Morona-Santiago, road from Limón to Cuenca, 2000 m, 28 March 1985, ***A. Hirtz, C & J. Luer & W. Flores 2405.*** Holotype: MO! (Illustration voucher).

Epidendro rhodantho Hágsater & Dodson simile sed caulibus prope caulis antiqui apicem natis, labelli lobulis lateralibus subquadratis ad marginem externum erosis, columnam tegentibus et interdum supra columnam superpositis, lobuli apicali triangulari parvo, petalis lineari-oblanceolatis ad marginem superum sinuosis recedens.

Hierba terrestre, erecta, de crecimiento sucesivo lateral, escasamente ramificada, de más de 40 cm de alto. **Raíces** de los entrenudos basales del tallo basal, carnosas, delgadas, 0.5-0.7 mm de grosor. **Tallos** tipo caña, teretes, delgados, producidos del entrenudo apical del tallo anterior, progresivamente más cortos, 3-40 x 0.1-0.25 cm. **Hojas** 3-7, distribuidas hacia la parte media apical de los tallos; vaina tubular, finamente estriada, verrugosa, 0.7-2.0 x 0.1-0.25 cm; lámina subcoriácea, angostamente lanceolada oblonga, ápice desigualmente bilobado, margen crenulado, 1.4-2.8 x 0.26-0.53 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, dística, suberecta, 10-18 mm de largo; pedúnculo corto, filiforme, 3-5 mm de largo, oculto entre las dos hojas apicales; raquis verrugoso. **Brácteas florales** más cortas a tan largas como el ovario, abrazadoras, deltoides, agudas, margen entero, uninervadas, escasamente verrugosa en la superficie dorsal, 1.6-3 mm de largo. **Ovario** terete, grueso, liso, no inflado, 1.5-4 mm de largo. **Flores** 3-5, sucesivas, no resupinadas, blancas con ápices de sépalos rosados a morado verdosas, sin datos de fragancia. **Sépalos** entreabiertos, libres, elípticos, agudos, 3-nervados, las nervaduras laterales ramificadas, margen entero, el **dorsal** 6-7.8 x 2.4-3.6 cm; los **laterales** oblicuos, aristados, 6-9.6 x 2.5-3.4 mm. **Pétalos** contiguos al sépalo dorsal, libres, linear a linear oblanceolados, subagudos, 1-nervados, margen recto a ligeramente sinuoso hacia la zona media apical superior, 6-7.3 x 0.5-1.15 mm. **Labelo** unido a la columna, trilobado, 4.2-6.5 x 6.3-10 mm; provisto de un par de quillas basales laminares, muy cortas, pubescente entre las quillas y a los lados del disco; base truncada, lóbulos laterales subcuadrados, margen exterior eroso, abrazando totalmente a la columna y en ocasiones sobrepuestos en posición natural, lóbulo apical triangular, pequeño. **Columna** geniculada con respecto del ovario, delgada, arqueada hacia arriba, 4.4-5 mm de largo. **Clinandrio** reducido, entero. **Antera** obovoidea, 4-locular. **Polinios** 4, ovoides, lateralmente comprimidos, los exteriores más pequeños. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** ausentes. **Nectario** penetrando hasta la mitad del ovario, angosto, pubescente frente a la cavidad estigmática, la ornamentación orientada hacia el fondo. **Cápsula** no vista.

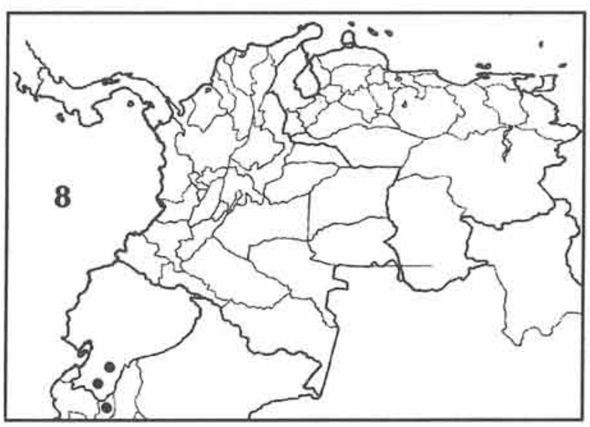
Terrestrial, somewhat branching **herb** with successive lateral growths. **Roots** from the basal internodes of the basal stem, fleshy, thin. **Stems** cane-like, terete, thin, produced apical internode of the previous stem, progressively shorter. **Leaves** 3-7, distributed throughout the apical half of the stem or bunched towards the apex; sheath tubular, finely striated and verrucose; blade narrowly oblong-lanceolate, apex unequally bilobed, margin crenulate, subcoriaceous. **Inflorescence** apical, sessile, flowering only once, racemose, suberect. **Floral bracts** shorter to as long as the ovary, deltoid, acute, 1-veined. **Ovary** terete, thick, smooth. **Flowers** 3-5, successive, non-resupinate, white with apex of sepals pink to greenish purple. **Sepals** half closed, elliptic, acute, 3-veined, the lateral veins branched, margin entire; laterals oblique, aristate. **Petals** contiguous to the dorsal sepal, linear to linear-oblanceolate, subacute, 1-veined, upper apical margin sinuous. **Lip** united to the column, 3-lobed, provided with a pair of short, basal laminar keels, pubescent between the keels and on the sides of the disc; base truncate, lateral lobes subquadrate, exterior margin erose, embracing the column and sometimes superposed in natural position, apical lobe triangular. **Column** geniculate at the base with respect to the ovary, thin, arched upwards. **Clinandrium hood** reduced, entire. **Anther** obovoid, 4-celled. **Pollinia** 4, obovoid, laterally compressed, the outer ones smaller. **Nectary** penetrating half the ovary, narrow, pubescent in front of the stigmatic cavity.

OTHER SPECIMENS: ECUADOR: Loja: Altos de Numbala, 2800-2900 m, VI 1982, *D'Alessandro 185*, SEL! (pro parte, the specimen of the far left). **PERU: Cajamarca:** San Ignacio; San José de Lourdes, "Campamento Zural, base del Cerro Picorana", 2200 m, 23 I 1999, *Díaz 10495,* AMO! MO!

OTHER RECORDS: PERU: Cajamarca: San Ignacio; San José de Lourdes, "Campamento Zural, base del Cerro Picorana", 2200 m, 23 I 1999, *Díaz 10495,* illustration, AMO!

DISTRIBUTION AND ECOLOGY: Known only from the eastern slopes of the Andes in southern Ecuador and neighboring Peru, in the basin of the Río Numbala, between 2000 and 2900 m altitude. Flowering from January to June.

RECOGNITION: *Epidendrum spasmosum* belongs to the Elleanthoides Group, Rhombochilum Subgroup which is characterized by the thin, branching habit, narrow, short, subcoriaceous leaves with a crenulate margin and unequally bilobed apex, racemose, subdistichous, short, inflorescence, with successive flowers, the entire lip embracing the column. The species is recognized by the non-resupinate flowers, white with the apices of the sepals pink to the whole flower greenish purple, the flowers are tightly cramped, with the lip embracing the column to leave only a round aperture through which the column may be reached for pollination, with subquadrate, erose lateral lobes of the lip and a small triangular apical lobes; the petals are linear to linear-oblanceolate, with the upper margin sinuous. *Epidendrum golondrinense* Hágsater & Dodson has a similar habit, but somewhat different, more numerous (up to 13), smaller flowers (sepals 3.8 mm long), the lip 3-lobed, with the lateral lobes smaller than the midlobe. *Epidendrum rhombochilum* is recognized by the triangular lip, two, lenticular pollinia slit longitudinally down one side and lanceolate dorsal sepal. *Epidendrum chrysanthum* Hágsater & Dodson has small, branching, caespitose plants with small, fleshy, bronzy yellow-green colored flowers produced simultaneously, the rhomboid lip enveloping the column, the sepals 6-8.5 mm long; it also has 2 pollinia, an infrequent character in the genus. *Epidendrum rhodanthum* which is sympatric with *E. chrysanthum*, has successive pink flowers, the lip transversely elliptic, apiculate, the sepals 8.5 mm long, and 4 pollinia. It is superficially similar to *E. guacamayense* Hágsater & Dodson that has quite similar flowers, but distinctly different, long, grassy leaves and the branching inflorescence with a long, hair-thin peduncle to each branch.

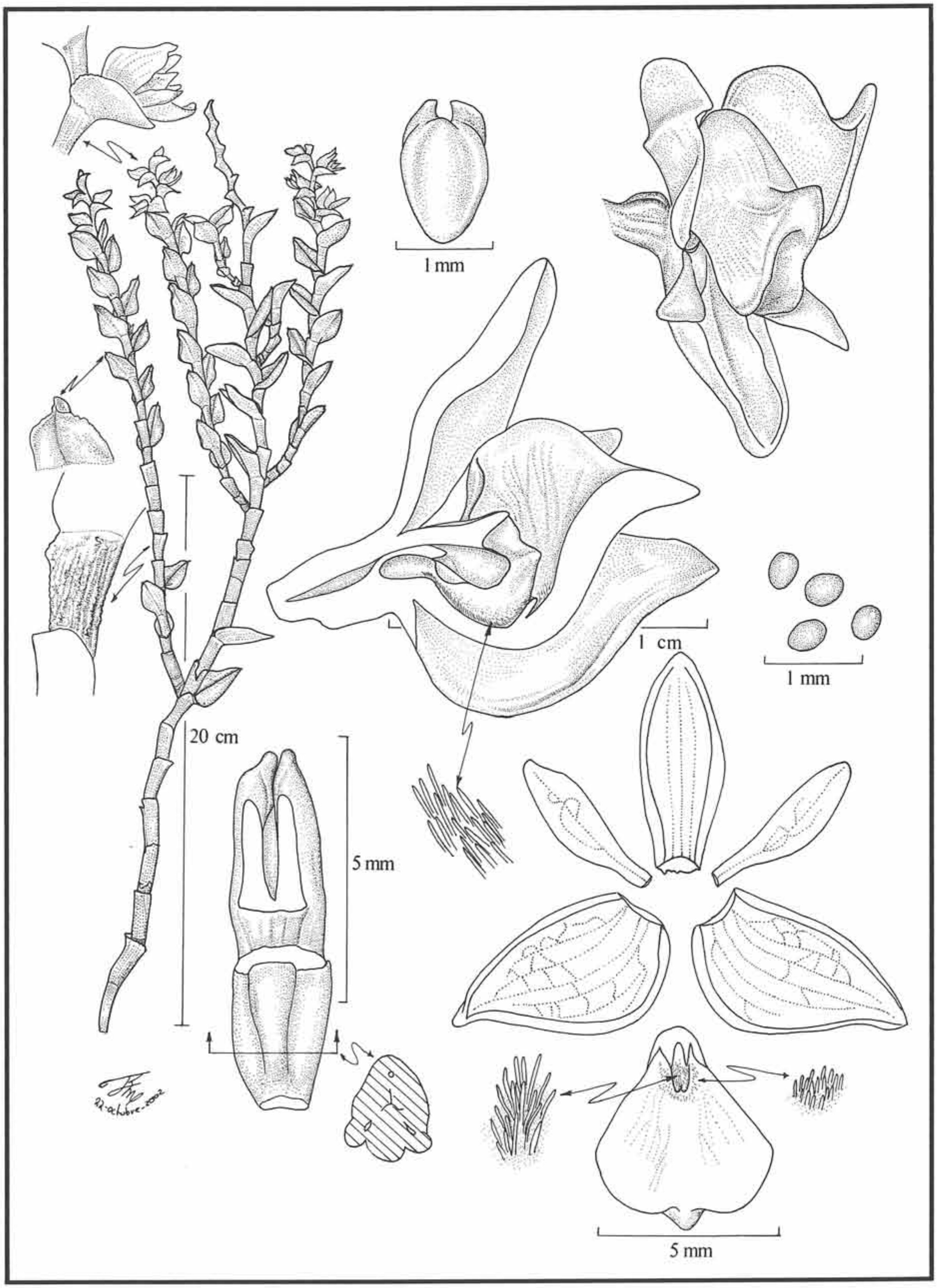


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek σπασμος-, a cramp, spasm, in reference to the cramped appearance of the flower, with the lip tightly embracing the column and the sepals and petals barely open.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM STENOCALYMMUM Hágsater & G. Calatayud Plate 790

EPIDENDRUM STENOCALYMMUM Hágsater et G. Calatayud, *sp. nov.*

Type: PERU: Cajamarca: San Ignacio, San José de Lourdes, Cerro Picorana, 4°58´17"S 78°53´00"W, 2830 m, 17 August 1998, ***J. Campos, L. Campos & L. Zurita 5538.*** Holotype: USM! (Illustration voucher). Isotypes: AMO!

Epidendro also Ridley & Thurn simile sed foliis parvis vix longioribus quam latioribus, inflorescentia erecta simplici disticha, petalis oblanceolatis unguiculatis, labello integro cuneato ad apicem rotundato, in positione naturali saccum profundum antice columnam formanti differt.

Hierba terrestre, ramificada, 20-80 cm de alto. **Raíces** de los entrenudos basales y raramente en algunas ramificaciones, delgadas, carnosas, blancas, 0.7-1.0 mm de grosor. **Tallos** erectos, ramificados hacia el ápice cuando maduros, tipo caña, teretes, ligeramente flexuosos, el principal de más de 34 x 0.26-0.48 cm, las ramas más cortas, 9-29 x 0.25-0.48 cm. **Hojas** numerosas en el tallo principal, las basales generalmente caedizas, 11-18 en las ramas, distribuidas a todo lo largo de los tallos, alternas, dísticas, coriáceas, rugosas en la superficie dorsal; vaina tubular, algo infundibuliforme en seco, estriada, muy rugosa, 0.7-1.5 x 0.26-0.48 cm; lámina ovada, ápice subagudo, con una quilla dorsal prominente, margen ligeramente ondulado, 1.2-2.1 x 0.9-1.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, racemosa, dística, erecta, 5-6 cm de largo; pedúnculo muy corto, terete, delgado, desprovisto de brácteas, 3-7 mm de largo; raquis terete, marcadamente flexuoso, 3-5 cm de largo. **Brácteas florales** más largas que el ovario, gradualmente más pequeñas hacia el ápice, anchamente triangulares, agudas, margen crenulado a entero, retrorsas, abrazadoras, fuertemente estriadas en la superficie ventral, 4-9 x 6-8 mm. **Flores** 4-9, no resupinadas, el labelo siempre hacia el raquis, sucesivas, 2-4 abiertas a la vez, color amarillo a crema verdoso, sin datos de fragancia. **Ovario** subtriquetro, ventralmente con 3 quillas prominentes, redondeadas, liso, 4 mm de largo. **Sépalos** libres, carnosos, margen entero y ligeramente involuto, 9.0-10.4 x 3.8-6.0 mm; el **dorsal** extendido, angostamente elíptico, subagudo, 3-nervado; los **laterales** entrecerrados, paralelos con respecto a la columna, ovados, oblicuos, agudos, 3-nervados, las nervaduras laterales ramificadas desde la base dando la apariencia de ser 5-nervados. **Pétalos** libres, entrecerrados, unguiculados en la base, oblanceolados, redondeados, 1-nervados, la nervadura cortamente ramificada hacia la mitad apical, margen entero, carnosos, 7.7-8.0 x 2.0-2.2 mm. **Labelo** unido a la columna, formando un saco profundo y cubriendo totalmente la columna sin abrazarla; entero, cuneado, ápice redondeado, con un apículo corto, ancho y redondeado, carnoso, margen entero; bicalloso, los callos delgados, paralelos, muy cortos y pubescentes; superficie pubescente en la base; 9 x 8 mm. **Columna** recta, gruesa, ventralmente provista de un par de alas redondeadas en el ápice, 5 mm de largo. **Clinandrio** reducido, entero. **Antera** obovoide, 4-locular. **Polinios** 4, lenticulares. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de la mitad del largo de la cavidad estigmática. **Nectario** sin penetrar el perianto, pubescente frente a la cavidad estigmática. **Cápsula** elipsoide, sésil, sin cuello apical, con el perianto persistente, 12 x 6-7 mm.

Terrestrial, branching, **herb. Roots** fleshy, thin, basal. **Stem** erect, branching towards the apex of the mature stem, cane-like, terete, somewhat flexuous, the branches shorter than the main stem. **Leaves** numerous on the main stem, 11-18 on the branches, distributed throughout; sheath tubular, somewhat infundibuliform when dry, striated and very rugose; blade ovate, small, apex subacute, with a prominent dorsal keel, margin somewhat undulate. **Inflorescence** apical, flowering only once, racemose, distichous, erect, rachis strongly flexuous. **Floral bracts** longer than the ovary, widely triangular, acute, margin crenulate to entire, retrorse. **Flowers** 4-9, non-resupinate, successive, 2-4 open at one time, yellow to greenish-creamy. **Ovary** short, subtriquetrous, ventrally with 3 prominent, rounded, keels. **Sepals** free, fleshy, margin entire and slightly involute; the **dorsal** spreading, narrowly elliptic, subacute, 3-veined; the **laterals** nearly closed, parallel to the column, ovate, oblique, acute, 3-veined, the lateral veins branching from the base so as to appear 5-veined. **Petals** free, nearly closed, unguiculate at the base, oblanceolate, rounded, 1-veined. **Lip** united to the column, forming a deep sac in front of the column and hiding it completely without embracing it; entire, cuneate, apex rounded, fleshy, margin entire, bicallose, calli thin, parallel, pubescent, basal surface pubescent. **Column** straight, thick, with a pair of rounded, apical wings. **Clinandrium hood** reduced, entire. **Anther** ovoid, 4-celled. **Pollinia** 4, lentil-shaped. **Rostellum** apical, slit. **Nectary** short, pubescent in front of the stigmatic cavity. **Capsule** ellipsoid, sessile, without any apical neck, perianth persistent.

OTHER SPECIMENS: PERU: Cajamarca: San Ignacio: San José de Lourdes, base del Cerro Picorana, 2200 m, 23 I 1999, *Díaz 10470*, AMO! QCNE!



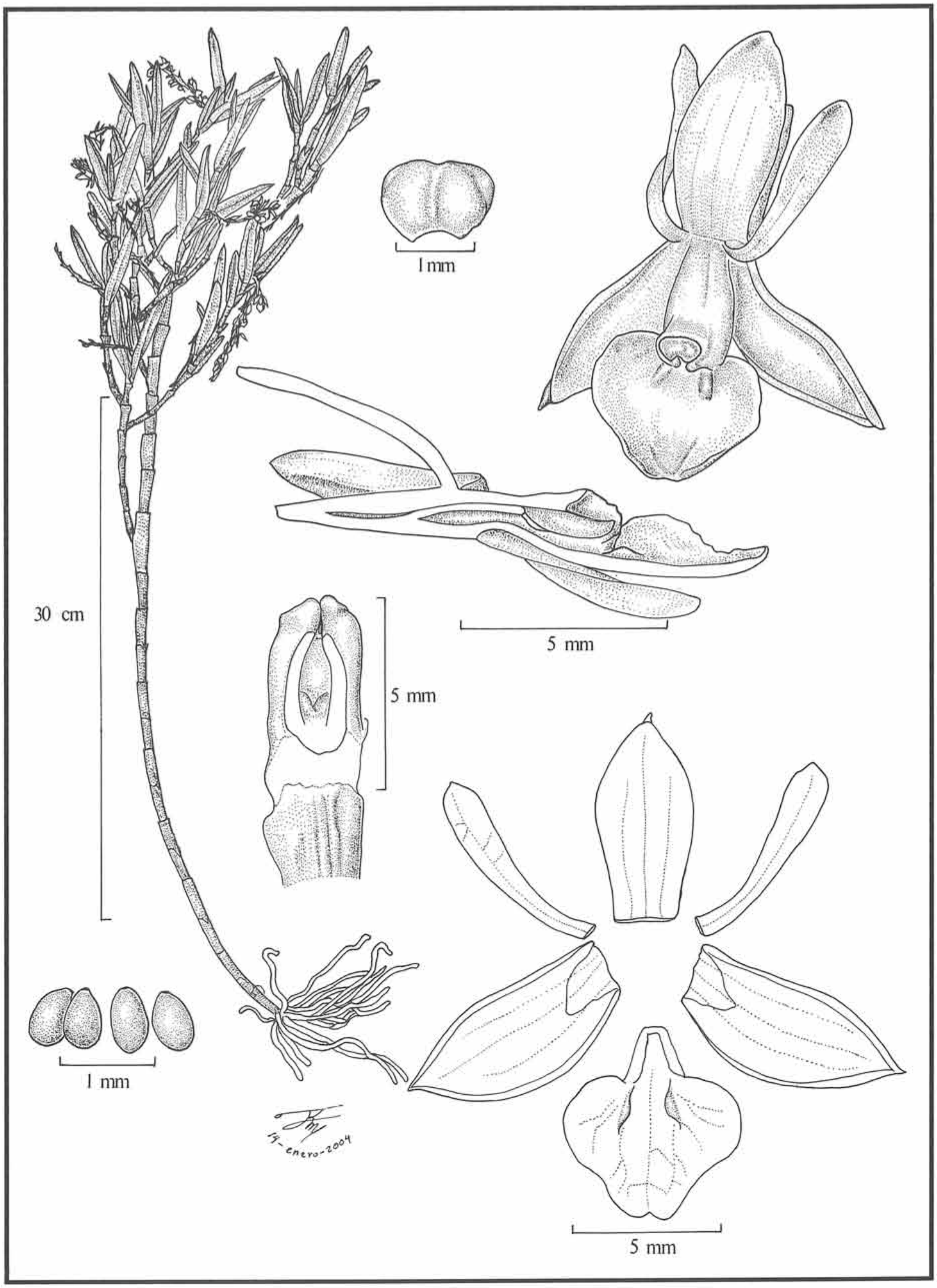
DISTRIBUTION AND ECOLOGY: Apparently endemic to Peru, Cajamarca, in the Province of San Ignacio, around Cerro Picorana, at 2200-2830 m altitude. Flowering from August to January. Beginning to fruit in January.

RECOGNITION: *Epidendrum stenocalymmum* belongs to the Macrostachyum Group, Aquaticum Subgroup characterized by the branching habit, distichous inflorescence, fleshy flowers and pubescent nectaries. The new species is recognized by the small, ovate leaves, simple, erect raceme, entire, oblanceolate, unguiculate petals and the cuneate lip forming a deep sac in front of the column, so that the column is not visible. It resembles *E. lindae* Hágsater & Dodson which has larger, wider leaves, a branching rachis, linear petals and a terete ovary, the lip is only slightly cuneate but 3-lobed, with the lateral lobes subquadrate. *Epidendrum campylorhachis* Hágsater has a three-lobed lip with the base cuneate, narrowly oblanceolate petals and an oblique, deeply triquetrous ovary, in addition, the rachis segments are prominently incurved below each bract. The new species has been confused with *Epidendrum alsum*, a Venezuelan species with larger habit and leaves, a paniculate inflorescence and somewhat 3-lobed lip, the basal lobes broadly rounded, the petals elliptic. *Epidendrum bractiacuminatum* Hágsater & Dodson also has a distichous inflorescence, but is much larger overall, leaves 13-18 cm long, floral bracts 15-45 mm long, sepals 12-17 mm long, and the lip is cordiform.

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek στενος- narrow, and καλυμμα- head-covering, hood, in reference to the narrow, hood-shaped lip of the non-resupinate flower.

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EPIDENDRUM STENOSTACHYUM Hágsater & E. Santiago

Plate 791

EPIDENDRUM STENOSTACHYUM Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Magdalena: Sierra Nevada de Santa Marta, alrededores de cabeceras de Río Sevilla, 3140 m, ***Harriet G. Barclay & Pedro Juajibioy 6627.*** Holotype: AMES! [Pro parte, the larger specimen in flower on the left.] (Illustration voucher). Isotypes: MO x2!

Epidendro soratae Rchb.f. simile sed labello integro late triangulari-ovato, ad apicem leviter retuso et lateribus rotundatis, petalis duplo latioribus ad apicem quam ad basem, nectario gracili discrepans.

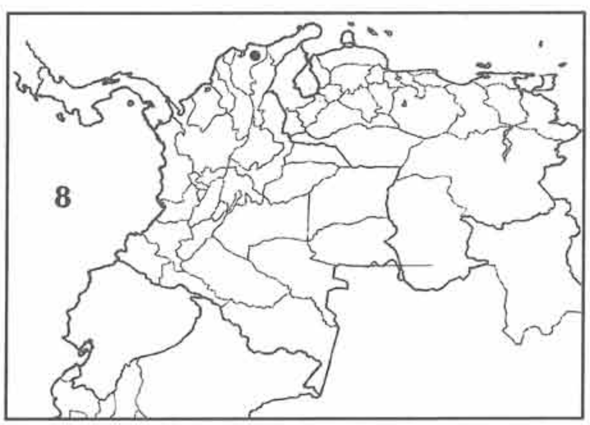
Hierba epífita, erecta, monopodial, ramificada arriba, 50-55 cm de alto. **Raíces** basales, carnosas, delgadas, blancas, 1.2-2.3 mm. **Tallos** muy ramificados en la mitad apical, tipo caña, teretes en la base a lateralmente aplanados en el ápice, delgados, rectos; el principal 46 x 0.4 cm; las ramificaciones a su vez ramificadas cerca del ápice, 4-10 x 0.23-0.42 cm. **Hojas** en el tallo principal ca. 12; 5 en las ramificaciones, distribuidas hacia la mitad apical de las mismas, suberectas, alternas, caedizas; vaina infundibuliforme, estriada, rugosa, 6-25 x 2.3-4.2 mm; lámina angostamente lanceolada, subaguda, con una quilla dorsal baja, margen entero, coriácea, la apical del tallo principal 6.5 x 0.5 cm, las de las ramificaciones 3-6 x 0.4-1 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, un racimo cilíndrico angosto, florece una sola vez, arqueado nutante, denso, 5-6 cm de largo; pedúnculo terete, delgado, corto, 4-7 mm de largo, provisto en la base de una bráctea linear lanceolada, 5 mm de largo. **Brácteas florales** cerca de la mitad del largo del ovario, angostamente triangulares, acuminadas, abrazadoras, gradualmente más cortas hacia el ápice, 2-4 mm de largo. **Flores** 14, simultáneas, aunque 2 ó 3 apicales presentes aún en botón floral, resupinadas, sépalos y pétalos amarillo verdosos con puntos púrpura, las nervaduras teñidas de púrpura, sin datos de fragancia. **Ovario** terete, delgado, liso, no inflado, 4-5 mm de largo. **Sépalos** libres, obovados, subagudos, con una quilla dorsal, 3-nervados, margen entero, 7-7.7 x 3.2-3.6 mm; el **dorsal** reflexo; los **laterales** entreabiertos, oblicuos, margen ligeramente involuto. **Pétalos** libres, reflexos, linear oblanceolados, redondeados, diminutamente apiculados, 1-nervados, margen entero, ligeramente falcados, 6.8 x 1.3 mm. **Labelo** unido a la columna, entero, en aspecto general anchamente ovado triangular, ligeramente constricto en la parte apical, truncado en la base, ligeramente retuso en el ápice, margen entero, 5 x 6 mm; bicalloso, los callos laminares, ocupando ca. de 1/3 del largo del labelo, desprovisto de quillas. **Columna** gruesa, recta, el ápice dirigido ligeramente hacia arriba, 5 mm de largo. **Clinandrio** corto, margen entero. **Rostelo** apical, hendido. **Antera** reniforme, con una quilla central baja, lisa, 4-locular. **Polinios** 4, obovoides. **Lóbulos laterales del estigma** no vistos. **Nectario** poco profundo, apenas penetrando detrás del perianto, angosto, no ornamentado. **Cápsula** no vista.

Epiphytic, erect, monopodial **herb,** branching above. **Roots** basal, fleshy, thin, white. **Stems** very much branched along the apical half, cane-like, terete at the base, laterally compressed above, thin, straight; the main stem tall, the branches much shorter. **Leaves** ca. 12 on the main stem, 5 on the branches, sheath somewhat infundibuliform, striated, rugose; blade narrowly lanceolate, subacute, with a low dorsal keel, coriaceous, margin entire. **Inflorescence** apical, a narrow, cylindrical raceme, flowering only once, nutant-arching, densely flowered; peduncle terete, thin, short, with a linear-lanceolate bract at the base. **Floral bracts** about half as long as the ovary, narrowly triangular, acuminate, the apical ones gradually shorter. **Flowers** 14, nearly simultaneous, the apical 2-3 still in bud, resupinate, sepals and petals yellow-green, spotted with purple, with purple veins, column yellow-green. **Ovary** terete, thin, smooth. **Sepals** free, obovate, subacute, with a dorsal keel, 3-veined, margin entire; the **dorsal** reflexed, the **laterals** partly spreading, oblique, margin slightly involute. **Petals** free, reflexed, linear-oblanceolate, rounded, minutely apiculate, 1-veined, margin entire, slightly falcate. **Lip** united to the column, entire, widely ovate-triangular, base truncate, apex slightly retuse; bicallose, the calli laminar, about 1/3 the length of the lip. **Column** thick straight, the apex slightly upturned. **Clinandrium hood** short, margin entire. **Rostellum** apical, slit. **Nectary** shallow, barely penetrating the ovary, narrow, smooth.

OTHER SPECIMENS: COLOMBIA: Magdalena: Entre Cerro Quemado y Cerro San Lorenzo, 2600-2800 m, 16 IV 1959, *Castañeda 7754*, COL! NY! Cerro Quemado, 2600-2800 m, 17 IV 1959, *Castañeda 7767*, COL! Ibid. *Castañeda 7771*, COL! Ibid. *Castañeda7843*, COL!

DISTRIBUTION AND ECOLOGY: Known only from the upper western slope of the Sierra Nevada de Santa Marta, at 2600-3140 m altitude, epiphytic on trees in river canyon with large rock outcrops, with trees and shrubs. Flowering from January to April.

RECOGNITION: *Epidendrum stenostachyum* belongs to the Soratae Subgroup of the Scabrum Group which is characterized by the branching habit starting on a monopodial primary stem, infundibuliform, rugose leaf-sheaths, lanceolate, aristate, acute leaves, racemose subcapitate inflorescence on a short, thin peduncle, and the bicallose lip. The new species is monopodial with many branches produced along the apical half of the stem, the inflorescence a long narrow cylinder with small flowers, the lip entire, widely triangular-ovate, the apex slightly retuse, and the falcate petals are somewhat more than twice as wide towards the apex as near the base. *Epidendrum soratae* from Bolivia, has a reniform, apically somewhat 3-lobed, bicallose lip, and the nectary inflated at the height of the perianth. *Epidendrum karstenii* Rchb.f., from around Bogotá, also has a narrowly cylindric inflorescence, but the plant habit is strictly sympodial and scarcely branched, with the new growth produced from the middle of the previous growth; the lip is deeply 3-lobed and the calli globose. *Epidendrum scopulorum* Rchb.f. is very similar but the new branches appear from the apex of the previous branch and thus appear as long branches with lateral inflorescences, wider ovate-lanceolate leaves (1.5 cm wide), relatively long peduncle of the inflorescence with an intermediate bract, few flowers on a compact, short, arching, nutant raceme, and the shallowly 3-lobed lip, the lobes subequal in size, the midlobe trapezoid and the base of the lip deeply cordate, the sepals about 8 mm long.

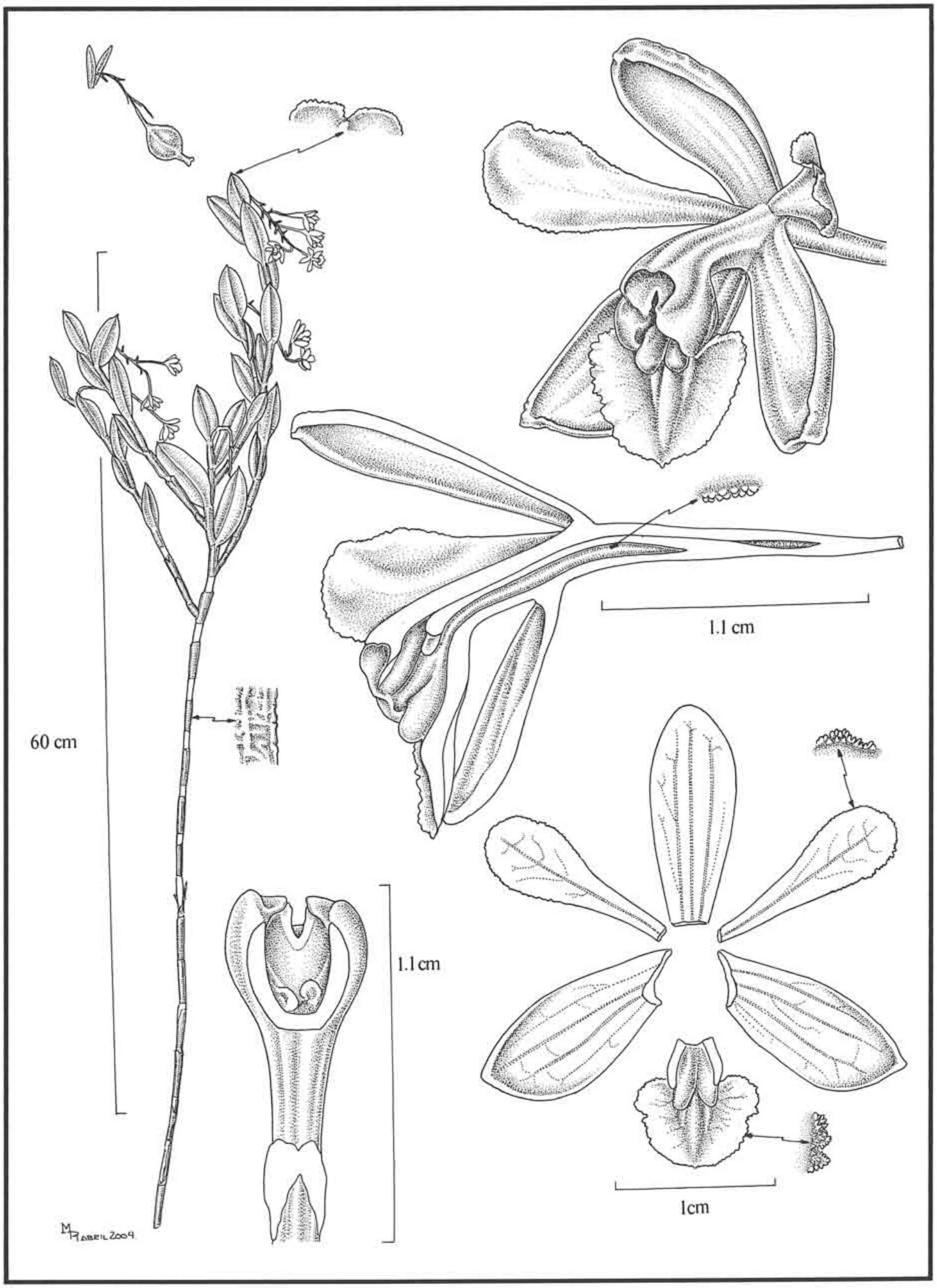


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek, στενος- narrow, σταχυς- ear of corn, in modern botany a spike, in reference to the narrow, cylindrical raceme characteristic of this species.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM SUMAPACENSE Hágsater & E. Santiago

Plate 792

EPIDENDRUM SUMAPACENSE Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Meta: Páramo de Sumapáz, Hoya Sitiales, Laguna La Primavera y alrededores Pedregal 3300 m al NW de la Laguna, 3580 m, 25 Enero 1972, ***Antoine M. Cleef 977.*** Holotype: U! (Illustration voucher). Isotypes: SEL! U!

Epidendro eroso Ames & C. Schweinf. simile sed foliis latioribus ellipticis, floribus majoribus, maculis purpureis carentibus, petalis latioribus, labello subreniformi ad basem 2 lobulos incipientes ferenti, columna recta recedit.

Hierba epífita, erecta, monopodial, ramificada, de más de 70 cm de alto. **Raíces** no vistas. **Tallos** ramificados hacia el ápice, tipo caña, teretes en la base a lateralmente aplanados arriba, erectos, rectos; el principal ca. 55 x 0.35-5.5 cm; las ramificaciones 17.5-19 x 0.26-0.55 cm. **Hojas** numerosas en el tallo principal; 5-8 en las ramificaciones, distribuidas en las 2/3 partes apicales de los tallos, subcoriáceas; vainas ligeramente infundibuliformes, estriadas y rugosas, 8-24 x 2.6-5.5 mm; lámina elíptica, ápice agudo, con una quilla dorsal baja, margen diminutamente crenado, ligeramente revoluto; las del tallo principal 4.4-6.0 x 2.0-2.5 cm; las de las ramificaciones 2.0-5.0 x 1.1-2.0 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada, laxa, 4.5-6.5 cm de largo, pedúnculo terete, delgado, recto, 1.5 cm de largo; provisto en la parte media de una bráctea triangular, acuminada, abrazadora, 8-10 mm de largo. **Flores** 12-15, sucesivas, varias abiertas a la vez, resupinadas, de color amarillo a amarillo anaranjadas; sin datos de fragancia. **Brácteas florales** mucho más cortas que el ovario, triangulares, agudas, abrazadoras, 2-5 mm de largo, las apicales gradualmente más cortas. **Ovario** terete, delgado, no inflado, no ornamentado, 13-25 mm de largo. **Sépalos** entreabiertos, angostamente obovados, redondeados, 3-nervados, las nervaduras cortamente ramificadas, margen entero, 14 x 6.2 mm; los **laterales** unidos de manera oblicua en la base de la columna, oblicuos, diminutamente apiculados. **Pétalos** entreabiertos, libres, subespatulados, redondeados, 1-nervados, las nervaduras cortamente ramificadas, margen papiloso, 13.7 x 4.6 mm. **Labelo** unido a la columna, entero, en aspecto general subreniforme, con un par de lóbulos incipientes en la base, ligeramente cordado en la base, ápice truncado, apiculado, margen papiloso, 5.5 x 8 mm; bicalloso, los callos gruesos, oblongos, cortos, disco provisto de 3 quillas lisas y bajas. **Columna** recta, delgada, angosta en la base, ancha hacia el ápice, 8 mm de largo. **Clinandrio** corto, margen entero. **Antera** no vista. **Polinios** no vistos. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** prominentes, de 1/3 del largo de la cavidad estigmática. **Nectario** penetrando 1/3 del ovario, delgado, no inflado, diminutamente papiloso. **Cápsula** no vista.

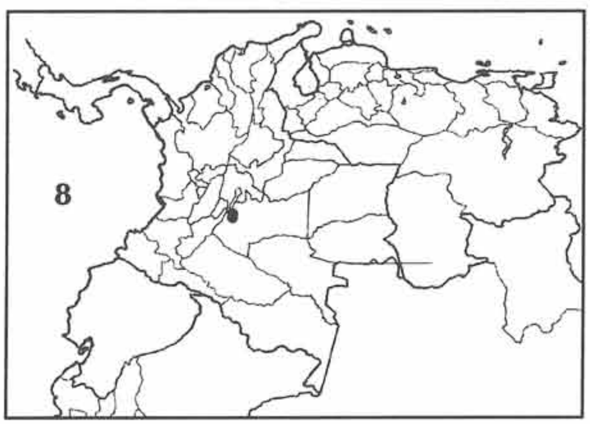
Epiphytic, erect, monopodial, branching **herb. Stems** branching toward the apex, cane-like, terete at the base, laterally compressed above, erect, straight. **Leaves** numerous on the main stem, 5-8 on the branches, distributed along the apical 2/3 of the stems, subcoriaceous; sheaths slightly infundibuliform, striated and rugose; blade elliptic, apex acute, with a low dorsal keel, margin minutely crenate, slightly revolute. **Inflorescence** apical, racemose, arching, lax-flowered; peduncle terete, thin, straight, provided with a triangular acuminate bract in the middle. **Flowers** 12-15, successive, several open at one time, resupinate, yellow to orange-yellow. **Floral bracts** much shorter than the ovary, triangular, acute, the apical ones gradually shorter. **Ovary** terete, thin, smooth. **Sepals** partly spreading, narrowly obovate, rounded, 3-veined, the veins shortly branched, margin entire; the **lateral** obliquely united to the base of the column, oblique, minutely apiculate. **Petals** partly spreading, free, subspathulate, rounded, 1-veined, the veins short branched, margin papillose. **Lip** united to the column, entire, subreniform, with a pair of incipient lobes at the base, slightly cordate, apex truncate, apiculate, margin papilose; bicallose, the calli thick, oblong, short, disc provided with 3 smooth, low keels. **Column** straight, thin, widened towards the apex. **Clinandrium hood** short, margin entire. **Nectary** penetrating 1/3 of the ovary, narrow, minutely papillose.

OTHER SPECIMENS: COLOMBIA: Meta: Macizo de Sumapáz; bajando de San Carlos, 3300 m, 8 VII 1981, *Díaz 2662*, MO! Cerro Nevado de Sumapaz, Quebrada El Buque, 3360 m, 14 I 1973, *Cleef 7842*, U!

DISTRIBUTION AND ECOLOGY: Apparently endemic to central Colombia, the Macizo de Sumapáz, in páramo, 3300-3360 m. Flowering from January to July.

RECOGNITION: *Epidendrum sumapacense* belongs to the Cardiophyllum Group, Soratae Subgroup characterized by the monopodial stem, branching habit, acute to acuminate leaves and infundibuliform sheaths. The species is recognized by the large flowers, entire, subreniform, yellow lip, with a pair of incipient lobes at the base, slightly cordate, apex truncate, apiculate, margin papilose, the large thick calli, and short disc provided with 3 smooth, low keels, and the straight column. It is very similar to *Epidendrum erosum* which has somewhat smaller flowers, narrowly elliptic leaves, entire, subcordiform-trapezoid lip with purple-pink spots and the margin denticulate-pubescent, the apex of the column purple tinted and the petals linear-subspathulate, rounded, the margin erose-denticulate. *Epidendrum ellemaniae* Hágsater & Dodson has somewhat shorter leaves, and flowers about half the size, sepals being 5.4-5.6 mm long, and a deeply cordiform, acute lip, petals linear-oblanceolate, acute, margin entire. *Epidendrum scopulorum* Rchb.f. has a more strict habit, leaves about the same size, sepals 9-9.5 mm long, but cordiform, apiculate and with an entire margin, the petals narrower, acute and also with an entire margin.

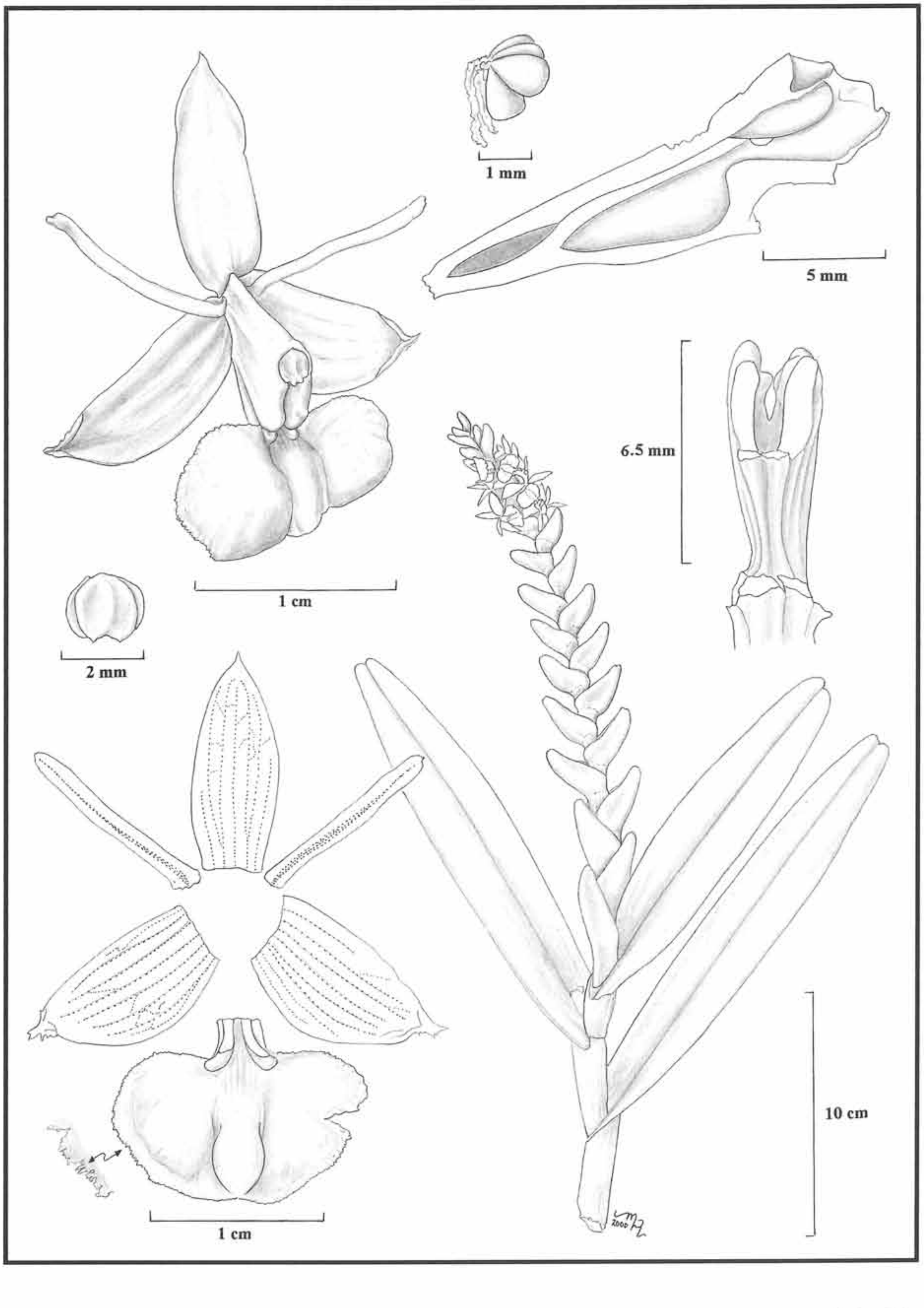
CONSERVATION STATUS: DD. Data deficient. Apparently endemic to the Macizo de Sumapáz.



ETYMOLOGY: In reference to the Macizo de Sumapáz, where the species has been collected.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM SYNCHRONUM Hágsater Plate 793

EPIDENDRUM SYNCHRONUM Hágsater, *sp. nov.*

Type: COSTA RICA: San José: en la Cordillera Central, La Palma, al norte de San Jerónimo de Moravia, bosque de neblina, 1450 m, 20 December 1982, pressed 14 August 1986, ***E. Hágsater 6990.*** Holotype: AMO! (Illustration voucher). Clonotype: pressed 15 June 1984, USJ!

Epidendro allochrono Hágsater simile sed florescentia successiva cum 4-5 floribus simul apertis, bracteis floralibus brevioribus et latioribus, sepalis acutis vice acuminatorum, petalis lineari-oblongis rotundatis vice lineari-acuminatorum differens.

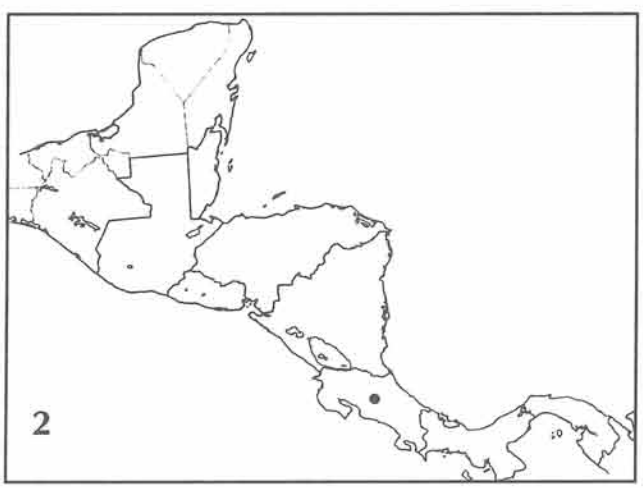
Hierba epífita, simpodial, cespitosa, 25-45 cm de alto, incluyendo la inflorescencia. **Raíces** basales, carnosas, gruesas, 2-3 mm de gruesor. **Tallos** sencillos, tipo caña, lateralmente comprimidos, rectos, 13-20 x 0.7-1.4 cm. **Hojas** 2-4[5], dísticas, distribuidas en la mitad apical del tallo; vaina tubular, lateralmente comprimida, lisa, hasta de 4.5 cm de largo; lámina angostamente oblonga, ápice desigualmente bilobado, margen entero, subcoriácea, lisa, verde con la base de las hojas nuevas amoratadas, 9-17 x 1.7-3.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, del tallo maduro, racemosa, florece una sola vez, dística, erecta, zigzag, 17-23+ cm de largo, pedúnculo y raquis lateralmente comprimidos, ancipitosos, no ornamentados, brácteas del pedúnculo semejantes a las florales pero subparalelas al raquis, imbricadas, conduplicadas, de 2-5 cm de largo. **Brácteas florales** desde más largas que el pedicelo hasta casi tan largas como este, ovadas, conduplicadas, ápice obtuso, casi redondeado, 17-32 x 6-14 mm; en las inflorescencias secas, ya sin flores, son abiertas, no imbricadas, algo arqueadas hacia adentro, obtusas. **Flores** 7-20, sucesivas, hasta 5 abiertas a la vez, no resupinadas, secundas, color verde teñidas de rojo borgoña, columna verde, brácteas algo teñidas de morado; fragancia nocturna seminal. **Ovario** inflado ventralmente en su mitad apical, terete, no ornamentado, 17 mm de largo. **Sépalos** entreabiertos, libres, ovado elípticos, agudos, glabros, coriáceos, margen extendido, entero, el **dorsal** 5-nervado, las nervaduras medias bifurcadas cerca de la base, 12.5 x 5 mm; los **laterales** con una quilla dorsal dentada, aristados, 7-nervados, algunas nervaduras bifurcadas cerca de la base, 11.5 x 6 mm. **Pétalos** adnados a los sépalos laterales, linear oblongos, redondeados, 1-nervados, margen extendido, 12 x 1.4 mm. **Labelo** unido a la columna, reniforme, base cordada, ápice redondeado, ligeramente emarginado, margen eroso, 8.5 x 14 mm; bicalloso, los callos pequeños, casi soldados al ápice de la columna, con una carina central roma ancha que termina en el seno apical. **Columna** recta, corta, gruesa, 6.5 mm de largo. **Clinandrio** reducido, entero. **Antera** reniforme, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos, subiguales; caudículas suaves y granulosas, más largas que los polinios; viscidio semilíquido, transparente. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** pequeños, menos de un cuarto del largo de la cavidad estigmática. **Nectario** profundo, penetrando la mitad del ovario, inflado detrás del perianto, no ornamentado. **Cápsula** no vista.

Epiphytic, sympodial, caespitose **herb**. **Stem** simple, laterally compressed, erect. **Leaves** 2-4[5], distichous, narrowly oblong, apex bilobed, coriaceous. **Inflorescence** terminal from mature growth, distichous, erect, zigzag, laterally compressed, ancipitose. **Flowers** 7-20, successive, up to 5 open at one time, non-resupinate, secund, somewhat burgundy-red tinted, the column green, bracts purple tinted; nocturnal seminal fragrance. **Floral bracts** longer than ovary to nearly as long as ovary and column, conduplicate, apex obtuse, nearly rounded, arched inward. **Ovary** inflated ventrally along the apical half. **Sepals** ovate-elliptic, acute, laterals dorsally keeled, the keel dentate towards the apex, aristate, 5-7-veined. **Petals** linear-oblong, apex rounded, 1-veined. **Lip** reniform, base cordate, apex somewhat emarginate, bicallose (the callii adnate to the column apex) with a wide, median low rounded keel. **Column** straight, clinandrium reduced, rostellum slit. **Clinandrium hood** reduced, entire. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, laterally compressed, subequal, caudicles soft and granulose, slightly longer than the pollinia, viscidium semiliquid, transparent. **Nectarium** deep, penetrating half of the ovary, inflated behind the perianth.

OTHER SPECIMENS: none seen.

DISTRIBUTION AND ECOLOGY: Known only form the Cordillera Central in Costa Rica, at 1450 m altitude, epiphytic in cloud forest. Flowering in January-March, June-August. In cultivation in Mexico City.

RECOGNITION: *Epidendrum synchronum* belongs to the Spathiger Group which is characterized by the sympodial growth habit, distichous inflorescence with large, conduplicate bracts, fleshy green flowers with narrow petals and reniform lip. The new species is recognized by the oblong leaves up to 3.2 cm wide, the wide, rounded, floral bracts, successive flowers with up to 5 open at one time, acute sepals, and linear-oblong, rounded petals. It is similar to *Epidendrum allochronum*, identified by the very narrow, linear, acuminate petals, the very long, relatively narrow, rounded, floral bracts, and the acuminate sepals, linear, and acuminate petals. The seminal fragrance is similar to that of *Epidendrum alvarezdeltoroi* Hágsater and *Epidendrum palmense* Ames; the first having the inflorescence no longer than the leaves and the flowers simultaneous, the second being recognized by the acute floral bracts and simultaneous flowers. *Epidendrum summerhayesii* Hágsater has similar floral bracts but these are more compact and imbricating, the petals somewhat wider, the whole inflorescence often deeply purple tinged, especially in Colombia.

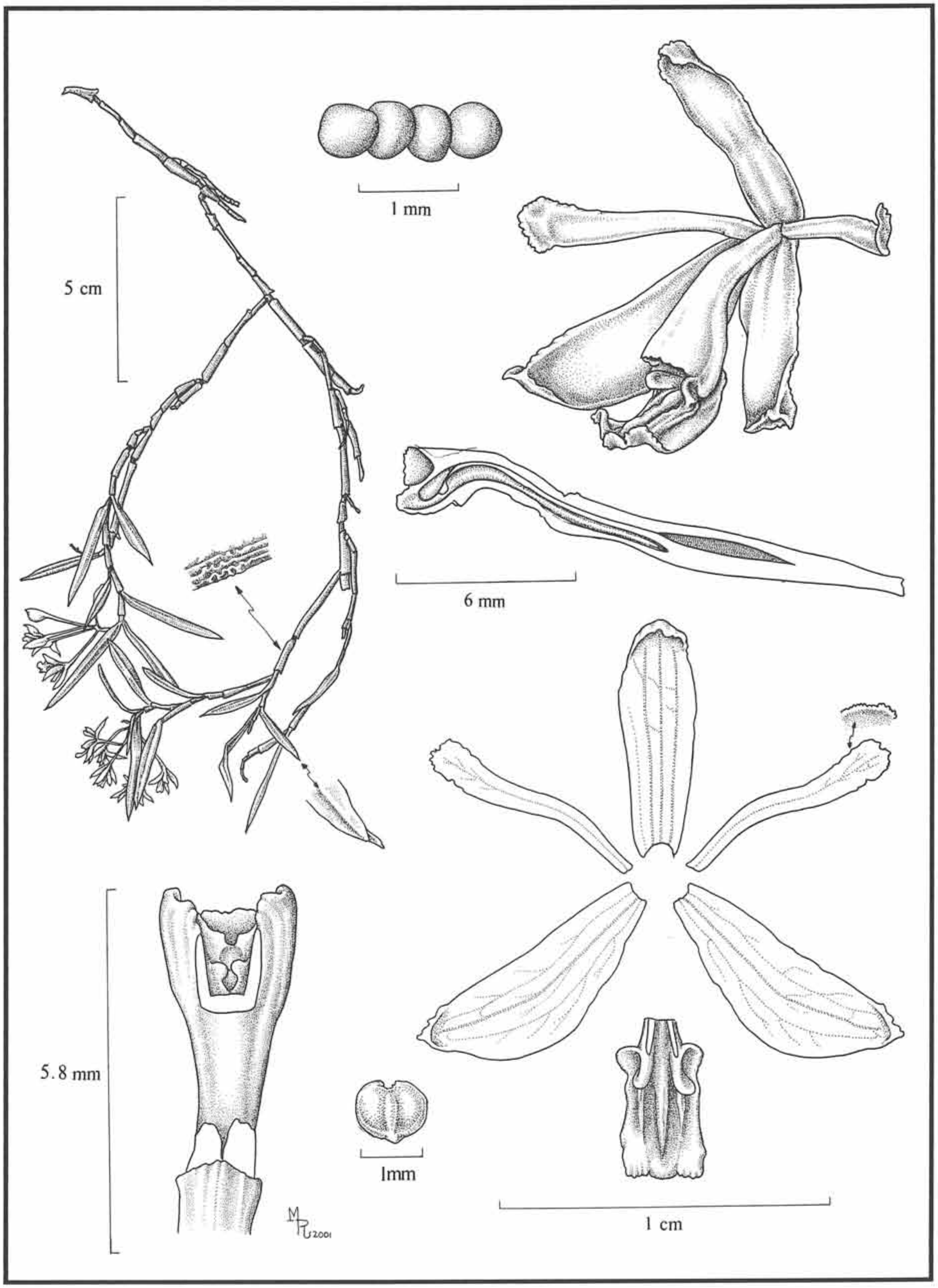


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek, συν- with, together, and χρονος- time, *synchronous*, in contraposition to *E. allochronum* which produces one flower at a time, though neither produces all the flowers simultaneously.

Author: E. Hágsater **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM TETRAGONUM Hágsater & Dodson **Plate 794**

EPIDENDRUM TETRAGONUM Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Carchi: Road El Angel to Tulcán, 3300-3650 m, 6 April 1985, ***A. & X. Hirtz & C. & J. Luer 2430.*** Holotype: RPSC! (Illustration voucher).

Epidendro cuniculato Schltr. simile sed caulibus gracilioribus, vaginis infundibuliformibus, segmentis floralibus angustioribus, labello integro rectangulari lobulos laterales carenti, nectario breviore et graciliore discrepans.

Hierba ramificada, de más de 20 cm de alto. **Raíces** no vistas. **Tallos** cortos, muy ramificados, tipo caña, teretes, rectos, los nuevos tallos se producen de la parte media apical del tallo anterior, no hay tallo principal, de 3.0-6.5 x 0.1-0.14 cm. **Hojas** 4-6, distribuidas hacia el ápice de los tallos, alternas; vainas tubulares, estriadas y finamente rugosas, algo infladas en seco, hasta de 1.1 cm de largo; lámina linear lanceolada, ápice agudo, apiculado, con quilla dorsal apical, margen entero, lisa, 1.8-4.0 x 0.16-0.34 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, arqueada, corta, florece una sola vez, 2.5 cm de largo, pedúnculo muy corto, terete, liso, desprovisto de brácteas, 2-3 mm de largo. **Brácteas florales** mucho más cortas que el ovario, triangulares, acuminadas, 3-4 mm de largo. **Flores** 6, simultáneas, resupinadas, de color naranja pardo, sin datos de fragancia. **Ovario** terete, delgado, liso, algo inflado en dos terceras partes ventralmente, 9-11 mm de largo. **Sépalos** entreabiertos, libres, elíptico oblanceolados, con una quilla dorsal erosa y prominente en el ápice, margen extendido y entero, 3-nervados, membranáceos, 7-8 x 2.3-3 mm; los **laterales** ligeramente oblicuos. **Pétalos** entreabiertos, angostamente oblanceolados, redondeados, 1-nervados, margen irregularmente dentado hacia el ápice, membranáceos, 7 x 1 mm. **Labelo** unido a la columna, entero, oblongo, rectangular, con dos pequeños lóbulos inconspicuos en la base, base inconspícuamente cordada, ápice truncado, ligeramente trilobulado, margen irregular en el ápice, 4.2 x 2.6 mm; bicalloso, los callos alargados, prominentes, divergentes, disco provisto de 3 carinas, las laterales cortas, la central prominente, alargándose cerca del ápice. **Clinandrio** corto, margen irregular. **Antera** 4-locular. **Polinios** 4, obovoides. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** pequeños, de 1/3 de la cavidad estigmática. **Nectario** penetra dos terceras partes del ovario, no inflado. **Cápsula** no vista.

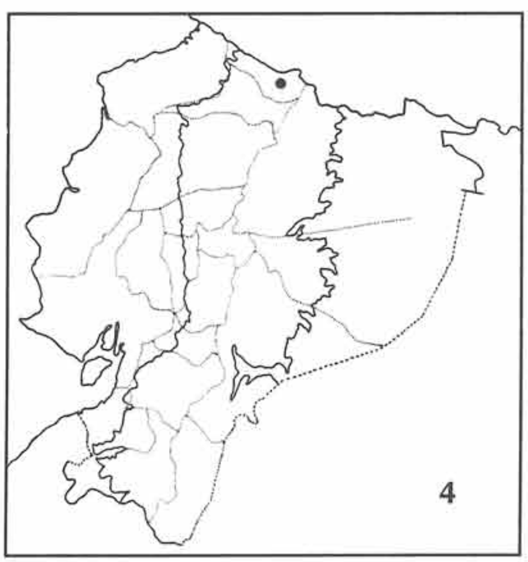
Branching **herb. Stems** much branched, without any clear primary stem; a series of short, thin, terete, cane-like stems, producing new stems from the upper half. **Leaves** 4-6 per stem, distributed along the upper half of each stem; sheaths tubular, striated and rugose, somewhat inflated when dry; blade linear-lanceolate, dorsally keeled towards the apex, apiculate, margin entire. **Inflorescence** apical, racemose, arching, short, flowering only once; peduncle very short, terete, without bracts. **Floral bracts** much shorter than the ovary, triangular, acuminate. **Flowers** 6, simultaneous, resupinate, orange-brown. **Ovary** terete, thin, somewhat inflated ventrally about two thirds. **Sepals** partly spreading, free, elliptic-oblanceolate, with an apical, dorsal, erose keel, margin entire, 3-veined. **Petals** partly spreading, narrowly oblanceolate, rounded, margin irregular-dentate towards the apex, 1-veined. **Lip** united to the column, entire, oblong, rectangular, with two small, inconspicuous lobes at the base, base inconspicuously cordate, apex truncate and slightly three-lobed, the apical margin somewhat irregular; bicallose, the calli elongate, prominent, divergent towards the apex, about 1/3 de length of the lip; the disc three-keeled, the mid-keel prominent nearly reaching the apex. **Clinandrium hood** short, margin irregular. **Pollinia** 4, obovoid. **Nectary** penetrating two thirds of the ovary, thin.

OTHER SPECIMENS: ECUADOR: Carchí: Tulcán, Páramo del Angel, 22 VII 1955, *Asplund 17004*, AMES!

DISTRIBUTION AND ECOLOGY: Known only from the Páramo del Angel in north-western Ecuador, near the Colombian border, at 3300-3600 m altitude. Flowering from April to July.

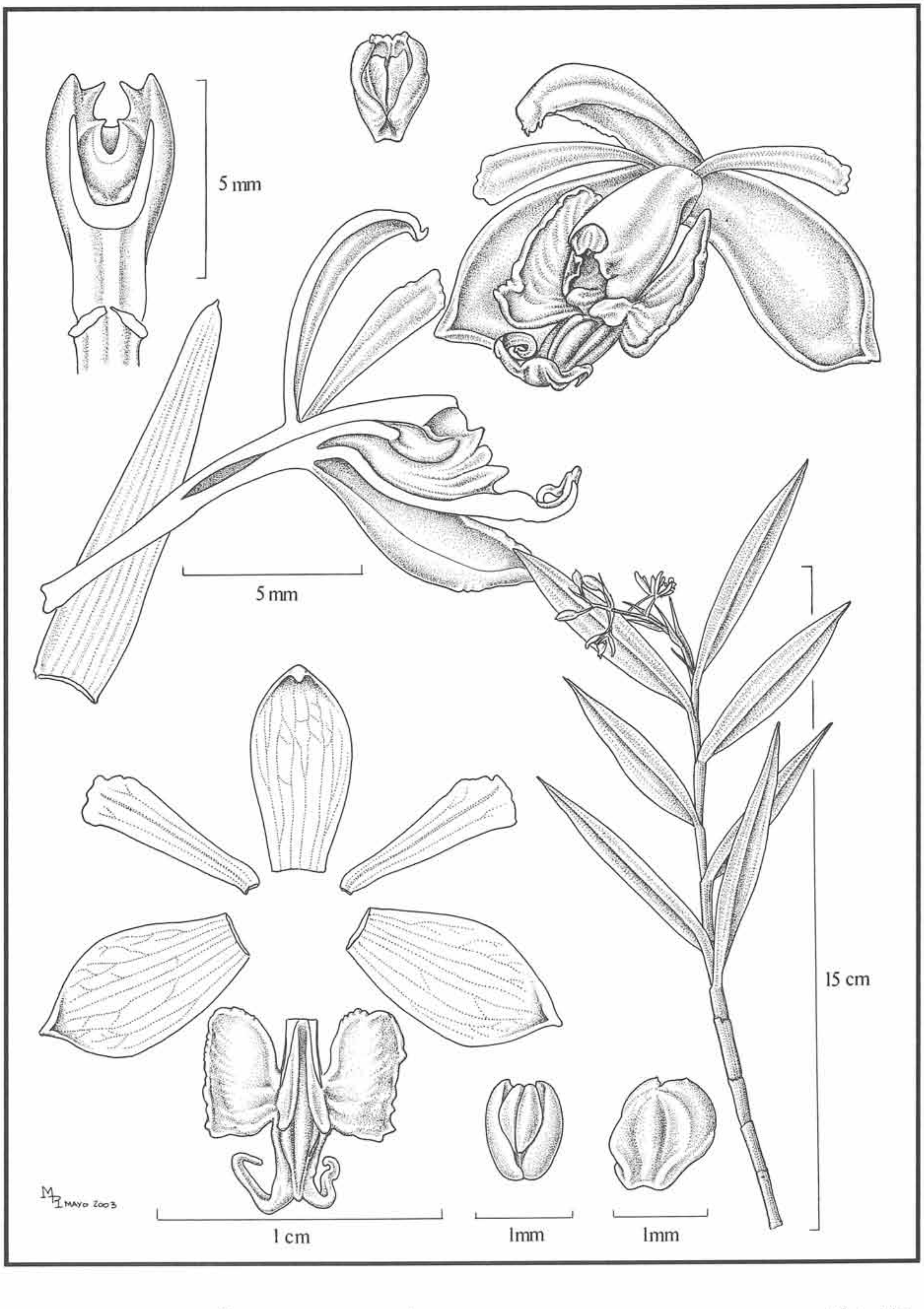
RECOGNITION: *Epidendrum tetragonum* belongs to the Scabrum Group, Cuniculatum Subgroup, which is characterized by the monopodial, branching habit, adpressed leaf-sheaths, acute leaves, margin crenate and usually a 3-lobed lip. The species is recognized by the relatively small flowers, sepals 7-8 mm long, narrowly oblanceolate petals with an irregular dentate apical margin, and the rectangular, entire lip, less than twice as long as it is wide, the base somewhat cordate, with 3 prominent keels. At first sight, the plants would appear to be similar to *Epidendrum cuniculatum* which has thicker stems, wider floral segments, and small lateral lobes of the lip and the midlobe about square (2.6 x 2.6 mm). Vegetatively it is similar to *Epidendrum cardenasii* Hágsater though this species has wider leaves (5-7 mm wide), yellow flowers and a bilobed, reniform, deeply cordate lip. The flowers are somewhat similar to *Epidendrum guagra-urcuënse* Hágsater & Dodson which is much larger vegetatively, with leaves 15-26 mm wide and has a larger, proportionately wider lip (7-8 x 6-7 mm) and wider petals with an entire margin.

CONSERVATION STATUS: DD. Data deficient.



ETYMOLOGY: From the Greek τετραγωνος- quadrangular, in reference to the rectangular shape of the lip characteristic of this species.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**
Herbario AMO **Apartado Postal 53-123, 11320 México, D.F., MÉXICO**



EPIDENDRUM TIWINZAËNSE Hágsater & Dodson

Plate 795

EPIDENDRUM TIWINZAËNSE Hágsater et Dodson, *sp. nov.*

Type: ECUADOR: Zamora-Chinchipe: cerca de Tiwinza, Cordillera del Condor, Hort. Ecuagenera, 1800 m, epífita, collected by *Hugo Medina Troyani, **E. Hágsater 13861.*** Holotype: QCNE! (Illustration voucher).

Epidendro bicirrhato D. E. Benn. & E. A. Christenson simile sed floribus majoribus, labelli lobulis lateralibus subquadratis, ad marginem carnosis, floribus viridibus pallidis, columna labelloque cremeo differens.

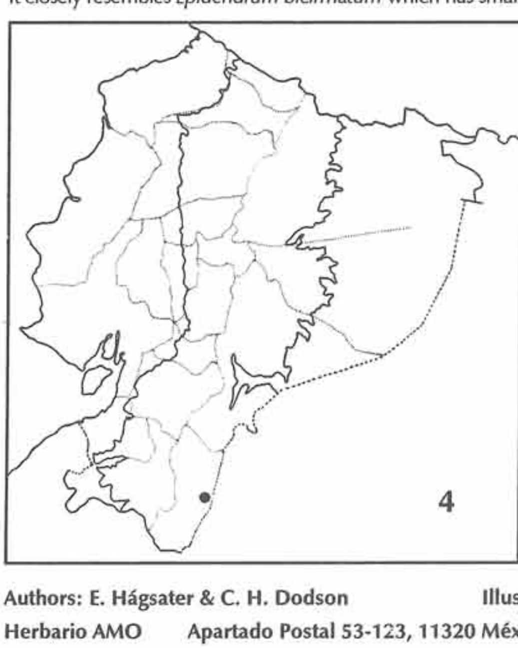
Hierba epífita, cespitosa, erecta, hasta 30 cm de alto. **Raíces** basales, carnosas. **Tallos** sencillos, tipo caña, teretes, delgados, rectos, 12.5-30 x 0.1-0.25 cm. **Hojas** 7, distribuidas a lo largo de los 2/3 apicales del tallo, suberectas, alternas, subcoriáceas; vaina tubular, finamente estriada, las basales fibrosas, 8-22 x 0.1-0.25 mm; lámina angostamente elíptica, ápice acuminado, diminutamente apiculado, margen entero, 4.6-6.0 x 0.5-1.0 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueada, florece una sola vez, 3.6 cm de largo; pedúnculo corto, terete, delgado, 12 mm de largo; provisto de dos brácteas basales, semejantes a las florales pero más largas, triangular lanceoladas, acuminadas, uninervadas, 15-20 mm de largo; raquis terete, delgado, 2.5 mm de largo. **Brácteas florales** del doble del largo del ovario, gradualmente más pequeñas hacia el ápice, triangular lanceoladas, acuminadas, 6.0-13 mm de largo. **Ovario** terete, delgado, no inflado, no ornamentado, 5-9 mm de largo. **Flores** 9, sucesivas, resupinadas, de color verde pálido, con la columna y labelo color crema, sin fragancia. **Sépalos** libres, entreabiertos, ligeramente cóncavos, obovados, ápice redondeado, diminutamente apiculado, margen entero, 7.3-7.7 x 3.8-4.3 mm; el **dorsal** 5-nervado; los **laterales** 7-nervados. **Pétalos** libres, entreabiertos, angostamente espatulados, obtusos, 3-nervados, margen apical ligeramente eroso, 7.1 x 2.2 mm. **Labelo** unido a la columna, trilobado, base profundamente cordada, 7.3 x 7.3 mm; bicalloso, los callos delgados, muy prominentes, alargados hasta la base del lóbulo medio; disco provisto de 3 quillas centrales prominentes, agudas, el par lateral más corto; lóbulos laterales subcuadrados, margen carnoso, eroso, levemente involuto, 2.8 x 4.5 mm; lóbulo medio subrectangular, gradualmente más angosto hacia el ápice, margen entero, ápice bilobado, los lóbulos cirrosos fuertemente divaricados y reflexos, tan largos como el lóbulo medio, 3.3 x 3.8 mm. **Columna** recta, obcónica, provista ventralmente de un par de alas rectas, 5 mm de largo. **Clinandrio** corto, entero. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** alargados, de casi todo el largo de la cavidad. **Antera** obovoidea, 4 locular. **Polinios** 4, tipo ala de pájaro, desiguales, el par interior más pequeño, de 3/4 partes del largo de los exteriores. **Nectario** sin penetrar el ovario, más angosto en la base y ampliándose gradualmente frente a la cavidad estigmática, liso. **Cápsula** no vista.

Epiphytic, caespitose, erect **herb. Roots** basal, fleshy. **Stems** simple, cane-like, terete, thin, straight. **Leaves** 7, distributed throughout the apical 2/3 of the stem, suberect, subcoriaceous; sheath tubular, minutely striated; blade narrowly elliptic, apex acuminate, minutely apiculate, margin entire. **Inflorescence** apical, racemose, short, arching, flowering only once; peduncle short, terete, thin, provided with two basal bracts similar to the floral bracts but longer. **Floral bracts** about twice as long as the ovary, gradually shorter toward apex, triangular- lanceolate, acuminate. **Ovary** terete, thin. **Flowers** 9, successive, resupinate, pale green, with the column and lip cream-colored, without fragrance. **Sepals** free, partly spreading, slightly concave, obovate, apex rounded, minutely apiculate, margin entire, the **dorsal** 5-veined, the **laterals** 7-veined. **Petals** free, partly spreading, narrowly spathulate, obtuse, 3-veined, apical margin slightly erose. **Lip** united to the column, 3-lobed, base deeply cordate; bicallose, the calli thin and very prominent, elongate to the base of the midlobe; disc provided with 3 prominent keels; lateral lobes subquadrate, margin fleshy thickened, erose, slightly involute; midlobe subrectangular, gradually narrowed towards the apex, margin entire, the apex bilobed with two cirrhate, strongly divaricate, reflexed lobes, as long as the midlobe itself. **Column** straight, obconical, provided ventrally with a pair of straight wings. **Clinandrium hood** short, entire. **Anther** obovoid, 4-celled. **Rostellum** subapical, slit. **Pollinia** 4, bird-wing type, unequal, the inner pair about 3/4 the size of the outer pair. **Nectary** without penetrating the ovary.

OTHER SPECIMENS: None seen.

DISTIBUTION AND ECOLOGY: ECUADOR on the Peruvian border of the Cordillera del Condor, at about 1800 m altitude. Flowering in March and April.

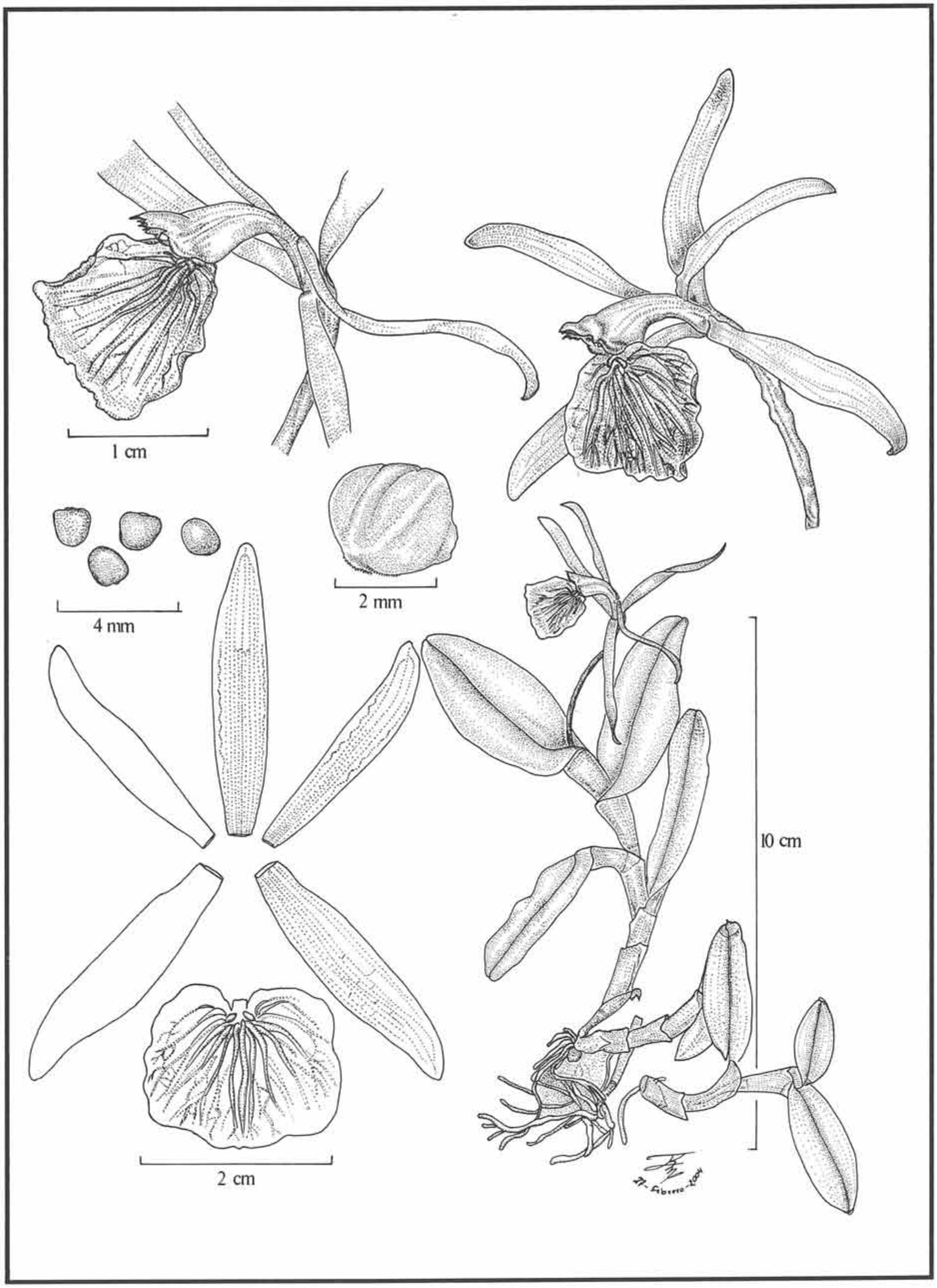
RECOGNITION: *Epidendrum tiwinzaënse* belongs to the Bicirrhatum Group which is characterized by the caespitose habit, simple, cane-like stems, short, arching, pluriracemose, subcapitate inflorescence, narrowly spathulate petals, 3-lobed lip, midlobe usually ending in cirrhate lobes and unequal, laterally compressed pollinia, with the inner pair smaller. The new species has pale green flowers with the column and lip cream-colored, sepals some 7 mm long, lateral lobes of the lip subquadrate, midlobe terminating in a pair of cirrhate lobes. It closely resembles *Epidendrum bicirrhatum* which has smaller, opaque, pale cream-orange flowers, the sepals and petals green at the base, the tips of the calli keels lavender, and the column white at the base, cream-yellow above. *Epidendrum hugomedinae* Hágsater & Dodson is vegetatively similar, but has very attractive, fragrant, snow-white flowers with the keels of the lip tinged violet and the obcuneate midlobe formed by two, somewhat divergent, rounded lobes. The Bolivian *E. ophidion* Dodson & Vásquez is quite similar to the first, but has successive, white flowers with three purple lines on the disc, pustulate sepals 6-8 mm long, and the dolabriform lateral lobes with a crenulate margin. *Epidendrum brachyblastum* Hágsater & Dodson has narrow lateral lobes of the lip, shorter apical cirrhose appendages and deep green flowers with the lip and apical half of the column snow white.



4

CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: The name refers to the locality of Tiwinza or La Wintza, on the Cordillera del Condor, southern Ecuador on the border with Peru, where the type was collected.



EPIDENDRUM TOBARII Hágsater & Dodson

Plate 796

EPIDENDRUM TOBARII Hágsater *et* Dodson, *sp. nov.*

Type: ECUADOR: Pichincha, Los Bancos, Comunidad Nuevo Mundo, 800 m, 20 January 2003, ***Francisco Tobar 483.*** Holotype: AMO! (Illustration voucher).

Epidendro platychillo Schltr. simile sed foliis brevioribus et angustioribus, sepalis petalisque anguste ellipticis, ad marginem integris et extensis, petalis usque ad columnae tertium basalem adnatis 7-nervatis distinctum.

Hierba epífita, cespitosa, 12 cm de alto incluyendo la inflorescencia. **Raíces** basales, carnosas, delgadas, 1-1.5 mm de grosor. **Tallos** sencillos, tipo caña, algo lateralmente aplanados, rectos, 7 x 0.4 cm. **Hojas** 3-4, equidistantes a lo largo del tallo; vaina foliar lateralmente aplanado, lisa, 0.8-1 cm de largo; lámina foliar ovado elíptica, ápice bilobado, margen entero, subcoriácea, 3.8-4 x 1.5-1.8 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, florece una sola vez, subcorimbosa, sésil. **Flores** 1, solitaria, resupinada, verde amarillenta, aparentemente sin fragancia. **Bráctea floral** mucho más corta que el ovario, ovada, redondeada, 4 x 2.5 mm. **Ovario** no inflado, terete, no ornamentado, 33 x 2 mm. **Sépalos** extendidos, libres, angostamente elípticos, redondeados, membranáceos, glabros, margen entero; el **dorsal** 11-nervado, 30 x 5.5 mm, los **laterales** 9-nervados, 27.5 x 4 mm. **Pétalos** entreabiertos, adnados hasta el tercio basal de la columna, angostamente elípticos, ápice redondeado, 7-nervados, margen entero, extendido, 26 x 2.5 mm. **Labelo** unido a la columna, entero, subcuadrado, la base ligeramente cordada, ápice subapiculado, margen ondulado, disco con numerosas venas engrosadas, 15.5 x 17.5 mm; bicalloso, los callos pequeños, subglobosos. **Columna** arqueada, 15.5 mm de largo. **Clinandrio** prominente, sobrepasa al ápice de la columna, eroso dentado. **Antera** subesférica, 4-locular. **Polinios** 4, subiguales, semiovoides, lateralmente aplanados. **Rostelo** no visto. **Lóbulos laterales del estigma** no vistos. **Nectario** no visto. **Cápsula** no vista.

Epiphytic, caespitose, short **herb. Roots** basal, fleshy, thin. **Stems** simple, cane-like, somewhat laterally flattened, straight. **Leaves** 3-4, distributed throughout the stem; sheath laterally flattened, smooth; blade ovate-elliptic, apex bilobed, subcoriaceous, margin entire. **Inflorescence** apical, flowering only once, subcorymbose, sessile. **Flowers** 1, solitary, resupinate, yellowish green. **Floral bract** much shorter than the ovary, ovate, rounded. **Ovary** terete, smooth. **Sepals** spreading, free, narrowly elliptic, rounded, membranaceous, glabrous, margin entire;the **dorsal** 11-veined, the **laterals** 9-veined. **Petals** partly spreading, adnate to the basal third of the column, narrowly elliptic, apex rounded, margin entire, spreading, 7-veined. **Lip** united to the column, entire, subquadrate, the base slightly cordate, apex subapiculate, margin undulate, disc with numerous thickened veins; bicallose, the calli small, subglobose. **Column** arching, long. **Clinandrium hood** prominent, surpassing the apex, entire, erose-dentate. **Anther** subsphaeric, 4-celled. **Pollinia** 4, subequal, semiovoid, laterally flattened.

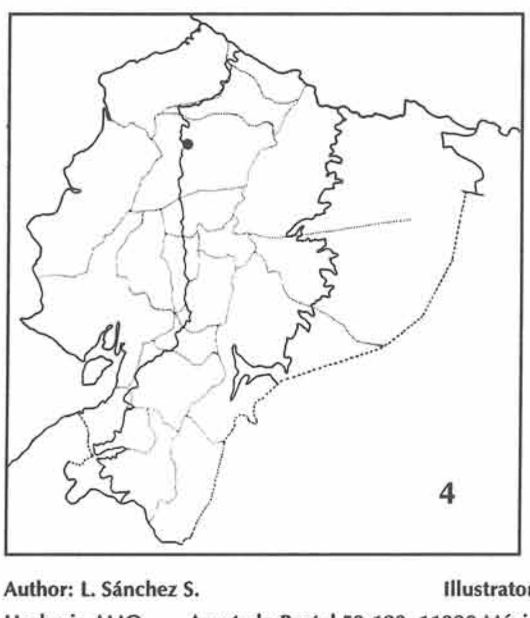
OTHER SPECIMENS: ECUADOR: Pichincha: Los Bancos, Comunidad Nuevo Mundo, 800 m, 20 I 2003, *Tobar 445*, QCNE! (Digital image, AMO!) Los Bancos, Comunidad Nuevo Mundo, 850 m, 25 III 2003, *Tobar 523*, QCNE! (Digital image, AMO!).

DISTRIBUTION AND ECOLOGY: Known only from the western slopes of the Andes in central Ecuador, from 800 to 850 m altitude. Epiphytic. Flowering in January to March.

RECOGNITION: *Epidendrum tobarii* belongs to the Difforme Group which is recognized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish green rarely white flowers. The new species has short plants, about 12 cm tall, small leaves, single flowers, sepals and petals narrowly elliptic, the sepals 9-11 veined, the petals adnate to the basal third of the column, 7-veined and the lip subquadrate with numerous thickened veins, the column arching and long with a prominent clinandrium hood. It is similar to *Epidendrum platychilum* which is found both north and south, has wider and longer leaves (6-7.6 x 2.3-3.4 cm), sepals and petals with a sinuate, revolute margin, and the obovate, 3-5-veined petals adnate only to the base of the column. *Epidendrum kerryae* Hágsater & L. Sánchez has larger plants, wider, longer leaves (5-9.5 x 2.5-4 cm), a triquetrous ovary, with a swollen vesicle behind the perianth, the lip suborbicular with the veins on the disc only slightly thickened, and a short, straight column (8-9 mm long). Other species of this group with swollen veins are *Epidendrum amparoanum* Schltr. from the Pacific slope in Costa Rica and Panama, and *Epidendrum yojoaënse* Hágsater from the Atlantic slope in Honduras.

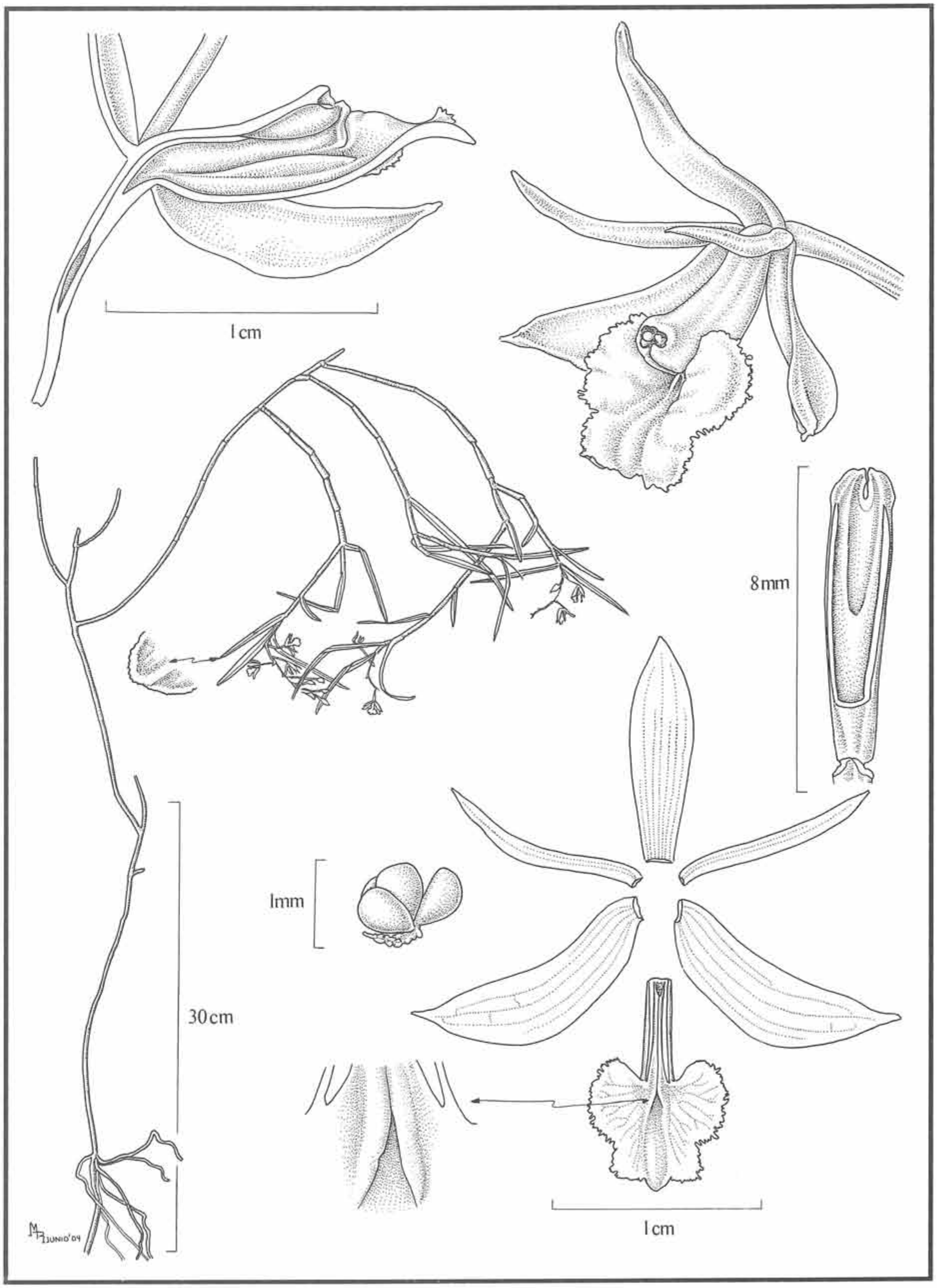
CONSERVATION STATUS: DD. Data deficient.

ETYMOLGY: In honor to José Francisco Tobar Abad of Quito, Ecuador, who collected the type specimen.



Author: L. Sánchez S. **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM TROPINECTARIUM Hágsater & E. Santiago

Plate 797

EPIDENDRUM TROPINECTARIUM Hágsater et E. Santiago, *sp. nov.*

Type: COLOMBIA: Valle del Cauca: Buga, (Cordillera Central, vertiente occidental) Inspección de Policía El Placer, Finca Campoalegre. Epiphytic, ca. 2200 m, 15 November 1981, ***Felipe A. Silverstone-Sopkin 973.*** Holotype: CUVC! (Illustration voucher). Isotype: MO!

Epidendro trachysepalo Hágsater simile sed foliis brevioribus, inflorescentia longiore et magis florifera, sepalis laevibus, labello trilobato, cum 2 carinis acutis versus nectarii partem interiorem secus columnae totam longitudinem prolongatis differens.

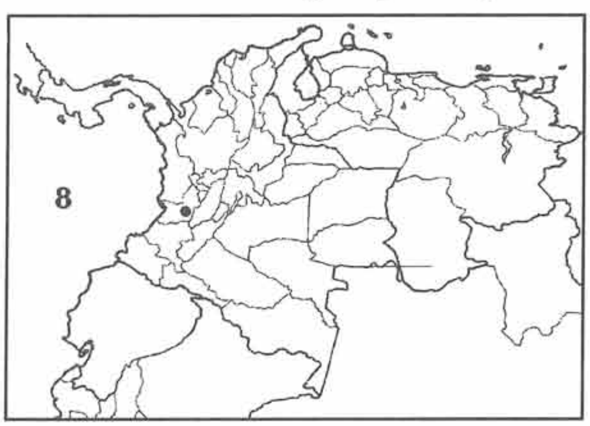
Hierba epífita, monopodial, ramificada, de más de 60 cm de alto. **Raíces** basales, carnosas, delgadas, blancas, 1.2-2.0 mm de grosor. **Tallos** ramificados, las ramificaciones producidas de manera sucesiva en los entrenudos apicales de ramas anteriores, tipo caña, teretes, delgados, el inicial 24 x 0.18 cm; las ramas 11-20 x 0.15-0.22 cm. **Hojas** 3-5, distribuidas en la mitad apical del tallo, alternas; vainas tubulares, finamente estriadas, 3-25 x 1.5-2.2 mm; láminas desiguales, las inferiores más pequeñas, linear lanceoladas, ápice desigualmente bilobado, diminutamente apiculado, subcoriáceas, margen entero, 1.8-7.7 x 0.3-0.4 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, ligeramente arqueada, florece una sola vez, 4-5 cm de largo; pedúnculo muy corto, terete, delgado, desprovisto de brácteas, 2 mm de largo. **Brácteas florales** más cortas que el ovario, angostamente triangulares, agudas, abrazadoras, 3.5-4 mm de largo. **Flores** 15, distribuidas laxamente a lo largo del raquis, sucesivas, color rosa muy claro, columna verde claro blancuzco; sin datos de fragancia. **Ovario** terete, delgado, no inflado, no ornamentado, 7-12 mm de largo. **Sépalos** entreabiertos, libres, agudos, lisos, margen entero, 10.6-11.4 x 3.0-3.4 mm; el **dorsal** oblanceolado, 7-nervado; los **laterales** angostamente elípticos, oblicuos, con una quilla dorsal prominente, 4-nervados, las nervaduras ramificadas dando la apariencia de ser 5-nervados. **Pétalos** entreabiertos, libres, lineares, agudos, 1-nervados, la nervadura ramificada desde la base dando la apariencia de ser 2-nervados, margen entero, 9.5 x 1 mm. **Labelo** unido a la columna, trilobado, base cordada, margen dentado, 6.2 x 7.0 mm; ecalloso pero en su lugar provisto de 2 quillas agudas, delgadas, lisas, adnadas entre sí en la base y a todo lo largo del nectario dentro de la columna, frente a la cavidad estigmática; lóbulos laterales reniformes 2.7 x 4.0 mm; lóbulo medio anchamente rectangular, truncado en el ápice, con un mucrón grueso producido por la quilla central, carnosa, roma, gruesa, 2.3 x 4.5 mm. **Columna** arqueada hacia arriba, delgada, 8 mm de largo. **Clinandrio** corto, margen entero. **Antera** no vista. **Polinios** 4, obovoides; caudículas casi tan largas como los polinios. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** reducidos, obsoletos. **Nectario** poco profundo, apenas penetrando el ovario, formado por una cavidad amplia limitada ventralmente por las quillas del labelo que se prolongan a casi todo lo largo. **Cápsula** no vista.

Epiphytic, monopodial, branching, erect **herb. Roots** basal, fleshy, thin, white. **Stems** branching, the branches produced in succession from the apical internodes of the previous stem, cane-like, terete, thin. **Leaves** 3-5, distributed throughout the apical half of the stem, alternate; sheaths tubular, minutely striated; blade unequal, the lower ones smaller, linear-lanceolate, apex unequally bilobed, minutely apiculate, subcoriaceous, margin entire. **Inflorescence** apical, racemose, somewhat arching, flowering only once; peduncle very short, terete, thin. **Floral bracts** shorter than the ovary, narrowly triangular, acute. **Flowers** 15, laxly distributed along the rachis, successive, very light pink, column whitish green. **Ovary** terete, thin, smooth. **Sepals** partly spreading, free, acute, margin entire; the **dorsal** sepals oblanceolate, 7-veined, the **laterals** narrowly elliptic, oblique, with a prominent dorsal keel, 4-veined, the veins branching, appear 5-veined. **Petals** partly spreading, free, linear, acute, 1-veined, the vein branching from the base so as to appear 2-veined, margin entire. **Lip** united to the column, 3-lobed, base cordate, margin dentate; ecallose, but provided with 2, acute, thin, smooth keels, adnate to each other at the base, and all along the nectary within the column, in front of the stigmatic cavity; lateral lobes reniform; midlobe widely rectangular, truncate at the apex, with a thickened mucro produced by the fleshy, rounded, thickened central keel. **Column** arched upwards, thin. **Clinandrium hood** short, margin entire. **Pollinia** 4, obovoid, caudicles nearly as long as the pollinia. **Rostellum** apical, slit. **Nectary** barely penetrating the ovary, forming a wide cavity, limited ventrally by the keels of the lip which run along nearly the entire length of the nectary.

OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, in southern Colombia along the western slope of the Cordillera Central, at 2200 m altitude northeast of Cali. Flowering in November.

RECOGNITION: *Epidendrum tropinectarium* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose without or with 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The new species is recognized by the thin stems, linear-lanceolate leaves 1.8-7.7 cm long, successive flowers, linear, 1-veined (branched and thus appear 2-veined), 1 mm wide petals and the 3-lobed lip, with a widely rectangular midlobe and two acute keels at the base which are prolonged inwards and adnate to each other nearly to the base of the nectary. *Epidendrum trachysepalum* from Peru, has leaves up to 8.5 cm long, dorsally exasperate sepals, linear to linear-lanceolate, 3-veined petals 2.2. mm wide, and the pandurate-subquadrate lip with 3 separate keels. *Epidendrum dosdonii* Hágsater & E. Santiago has 5.5-11.6 cm long leaves, narrowly ovate, 3-veined petals 2 mm wide and a 3-lobed lip with 5 keels. *Epidendrum dolichorhachis* Hágsater & Dodson has narrowly lanceolate leaves 2.6-11.4 cm long, oblong, 3-veined petals 2.3-2.6 mm wide and 5 erose-serrulate keels on the 3-lobed lip.

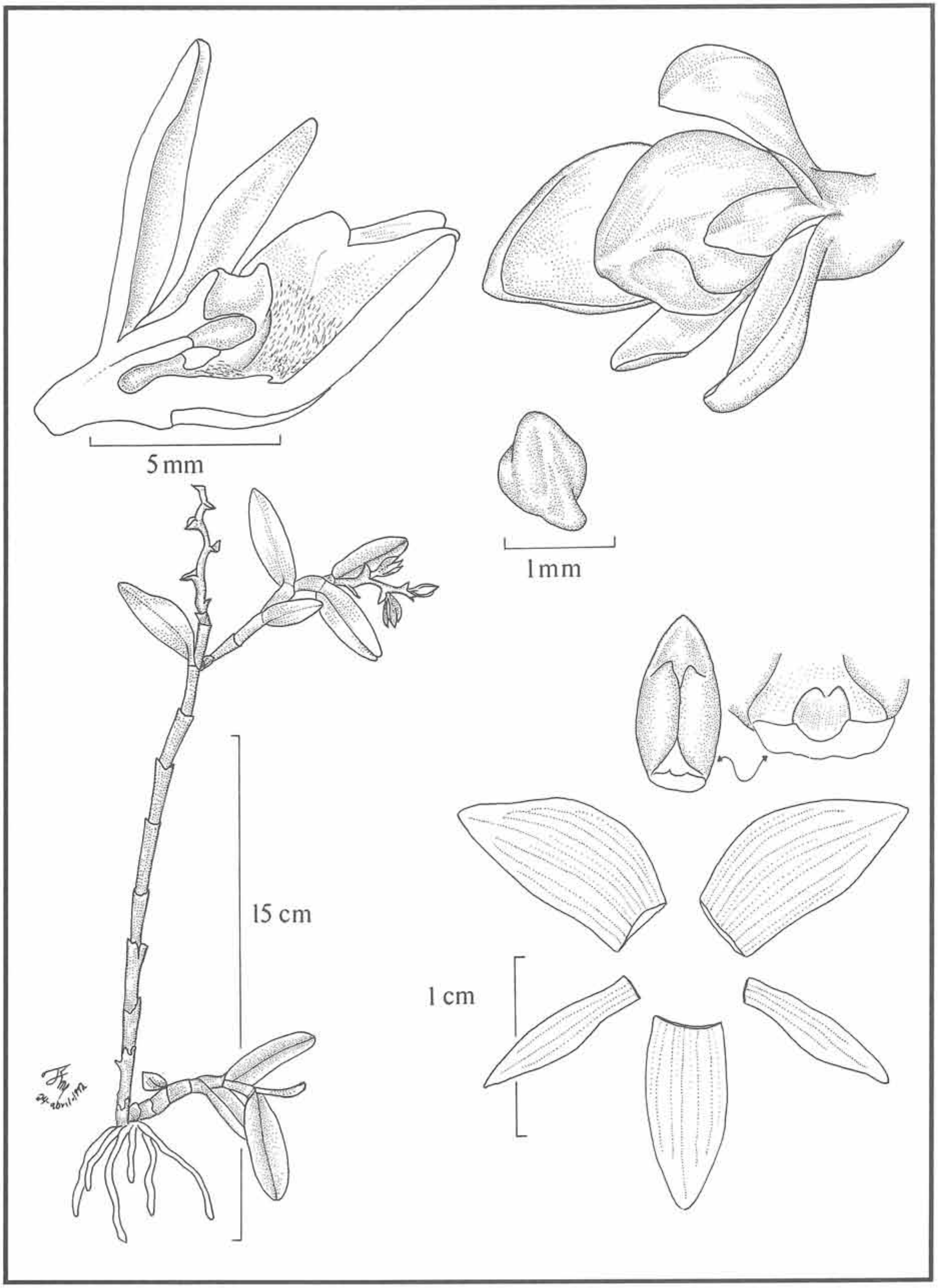


CONSERVATION STATUS: DD. Data deficient.

ETYMOLOGY: From the Greek, τροπις-, keel, and νεκταριον-, nectary, in reference to the peculiar keels within the nectary.

Author: E. Santiago **Illustrator: M. López R.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM WITHERSPOONIORUM Hágsater & Dressler Plate 798

EPIDENDRUM WITHERSPOONIORUM Hágsater et Dressler, *sp. nov.*

Type: PANAMA: Prov. Panamá, Cerro Jefe, trail leading W from summit, 24 September 1975, ***J. T. & F. Witherspoon 8489.*** Holotype: MO 2480912! (Illustration voucher).

Epidendro duro Lindl. simile sed sepalis brevioribus et latioribus, labello carnosiore et compactiore recedens.

Hierba epífita, cespitosa, de 20 cm de alto. **Raíces** carnosas, de la base del tallo principal, ca. 2-3 mm de grosor. **Tallos** ramificados cerca del ápice cuando maduros, erectos, tipo caña, teretes, el principal ca. 16 x 0.4-0.5 cm, las ramificaciones de ca. 5 x 0.3-0.4 cm. **Hojas** 4-7, distribuidas hacia la mitad apical de los tallos; vaina tubular, rugosa, 1-2 cm de largo; lámina elíptica, bilobada; 1.7-3.5 x 0.8-1.2 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, del tallo maduro, florece una sola vez, racemosa, dística, erecta, flexuosa, 3-5 cm de largo. **Brácteas florales** más largas que el ovario, progresivamente más cortas, perpendiculares al raquis, ovadas, algo carinadas hacia el ápice, 3-6 mm de largo. **Flores** 3-5, sucesivas, varias abiertas a la vez, no resupinadas, carnosas, "blanco verdoso"; fragancia no registrada. **Ovario** corto, grueso, terete, no inflado, no ornamentado, 2-4 mm de largo. **Sépalos** entreabiertos, ovado elípticos, obtusos, glabros, 7-nervados, con 2 nervaduras secundarias a los lados del principal y 2 más en los extremos, margen entero; el **dorsal** 10 x 5 mm; los **laterales** oblicuos, 12 x 7 mm. **Pétalos** entreabiertos, angostamente elíptico romboides, agudos, 3-nervados, margen entero, 10 x 2 mm. **Labelo** unido a la columna, trilobado, muy carnoso, no se puede extender una vez rehidratado, en posición natural los lados abrazando la columna y ocultándola totalmente, lóbulos laterales semiovados, redondeados, lóbulo medio triangular, agudo; callo un disco bajo, corto y cóncavo, emarginado, sin quillas, 10 x ca 10 mm. **Columna** corta, recurvada, gruesa, con dientes apicales laterales recurvados, 5 mm de largo. **Clinandrio** reducido, entero. **Rostelo** subapical, hendido. **Antera** ovoidea, aguda, carnosa, 4-locular. **Polinios** 4, obovoides, lateralmente comprimidos; caudículas suaves y granulosas. **Lóbulos laterales del estigma** prominentes, de 1/2 del largo de la cavidad estigmática. **Nectario** sin penetrar el ovario, con pilosidades pequeñas frente a la cavidad estigmática. **Cápsula** no vista.

Caespitose, epiphytic **herb**. **Roots** fleshy, from the base of the main stem. **Stems** cane-like, straight, terete, branching near the apex when mature, the branches somewhat smaller. **Leaves** 4-7, distributed throughout the apical half of the stems; sheaths tubular, rugose, blade elliptic, bilobed. **Inflorescence** racemose, distichous, apical from mature stems, flowers only once, erect, flexuosus. **Floral bracts** longer than the ovary, progressively shorter, perpendicular to the rachis, ovate, somewhat carinate towards the apex. **Ovary** short, thick, smooth. **Flowers** 3-5, successive, non-resupinate, fleshy, greenish white. **Sepals** ovate-elliptic, obtuse, the laterals some what oblique, 7-veined, with 2 secondary veins on the side of the main vein, and 2 more at each edge. **Petals** narrowly elliptic-rhombic, acute, 3-veined. **Lip** 3-lobed, very fleshy, the sides upturned and embracing the column and completely hiding it, lateral lobes semiovate, rounded, midlobe triangular, acute; callus a low, short, concave, emarginate disc, without keels. **Column** short, recurved, with lateral apical recurved teeth. **Clinandrium hood** reduced, entire. **Rostelo** subapical, slit. **Anther** ovoid, acute, thik, 4-celled. **Pollinia** 4, obovoid, lateraly compressed. **Nectary** without trespassing the perianth, pilose in front of the stigmatic cavity.

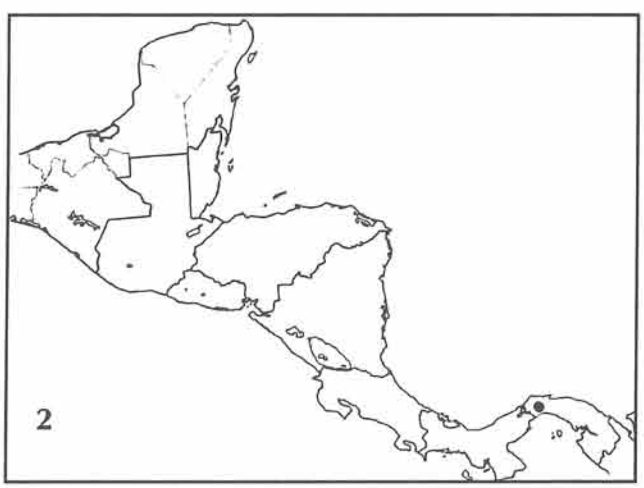
OTHER SPECIMENS: None seen.

DISTRIBUTION AND ECOLOGY: Known only from the type, near the summit of Cerro Jefe, in Central Panama, at around 900 m altitude. Flowering in August-September

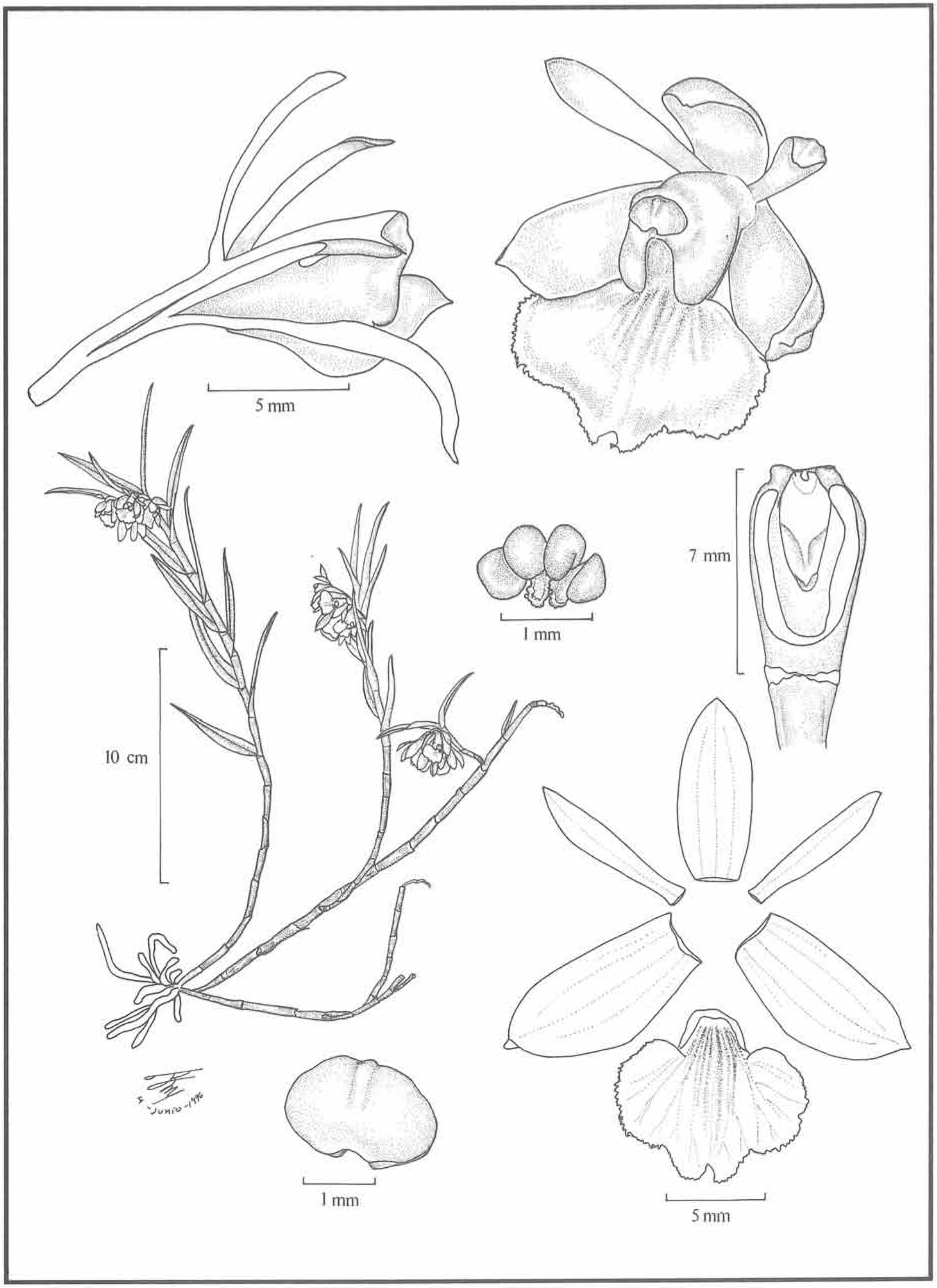
RECOGNITION: *Epidendrum witherspooniorum* belongs to the Aquaticum Subgroup of the Macrostachyum Group, which is characterized by the branching stems, distichous inflorescences, with a relatively thick peduncle, small, fleshy flowers, the lip 3-lobed and pubescent nectaries. The new species is recognized by the very fleshy, 3-lobed lip, the midlobe being very short, and the narrowly elliptic-rhombic, 3-veined petals. It is closely related to *Epidendrum durum* which has thiner flowers, the lateral lobes of the lip semiorbicular, and the midlobe narrowly triangular. *Epidendrum carnosiflorum* C. Schweinf. and *Epidendrum lindae* Hágsater & Dodson, also have thiner flowers, linear, 1-veined petals, and the former has a paniculate inflorescence.

CONSERVATION STATUS: DD. Data Deficient. Though the locality where the type was collected has been often searched by numerous collectors, we have no record of any other specimen.

ETYMOLOGY: In honor of the collectors of the type, John T. & F. Witherspoon. John T. Witherspoon collected briefly in Panama for the Missouri Botanical Garden, and then went on to work for Water Treatment and Supply in Springfield, Missouri, eventually becomming the Chairman of the Missouri Safe Drinking Water Commission.



Authors: E. Hágsater & R. L. Dressler **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**
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EPIDENDRUM YARUMALENSE Hágsater & E. Santiago

Plate 799

EPIDENDRUM YARUMALENSE Hágsater *et* E. Santiago, *sp. nov.*

Type: COLOMBIA: Antioquia: Municipio Yarumal, bajando a Ventanas, 2100 m, 26 March 1996, ***E. Hágsater, Rodrigo Escobar, Günter Gerlach & Corina de Gerlach 11682.*** Holotype: COL! Isotype AMO! Clonotype: 28 June 1996, JAUM! (Illustration voucher).

Epidendro cochabambano Dodson & Vásquez simile sed caulibus magis floriferis, ad apicem ramosis, floribus majoribus, labello ad basem cordato, columna leviter arcuata 7 mm longa, nectario perianthum transitanti, sepalis glabris differt.

Hierba epífita, cespitosa, ramificada, de 15-20 cm de alto. **Raíces** basales, delgadas, carnosas, blancas, 0.5-1.8 mm de grosor, de color rojizo en la zona apical cuando está en crecimiento. **Tallos** ramificados en la porción media apical, tipo caña, teretes, delgados, rectos, los principales de 12-16 x 0.15-0.2 cm, las ramificaciones 3.5-14 x 0.1-0.15 cm. **Hojas** 4-8, distribuidas hacia la parte media apical de los tallos, erectas, dísticas; vaina tubular, finamente estriada, café cuando seca, rojiza cuando fresca, 1.1-1.7 x 0.1-0.2 cm; lámina angostamente lanceolada, ápice obtuso a diminutamente bilobado, con una quilla dorsal inconspicua, margen entero, las del tallo principal 4-5.5 x 0.37-0.45 cm, las de las ramificaciones 2.7-5.5 x 0.25-0.38 cm. **Bráctea espatácea** ausente. **Inflorescencia** apical, racemosa, corta, arqueada nutante, florece una sola vez, 2.5-3 cm de largo, pedúnculo corto, terete, delgado, desprovisto de brácteas, 3-4 mm de largo. **Brácteas florales** más cortas que el ovario, triangulares, acuminadas, 2-4 mm de largo. **Ovario** terete, delgado, no inflado, liso, 6.5-8 mm de largo. **Flores** 7-9, sucesivas, resupinadas, color verdoso más o menos teñidas de rojizo, columna verde de un tono mas claro que los segmentos, sin datos de fragancia. **Sépalos** extendidos, libres, glabros, elípticos, ligeramente cóncavos, obtusos, 3-nervados, margen entero; el **dorsal** ligeramente incurvado, 8-11 x 3-5 mm; los **laterales** oblicuos, con una quilla dorsal, la cual forma un pequeño apículo, 8.8-12 x 3-5.5 mm. **Pétalos** extendidos, libres, incurvados, oblicuos, linear oblanceolados, agudos, 1-nervados, margen entero, 7-10 x 0.7-1.4 mm. **Labelo** unido a la columna, entero, reniforme, ápice 4-lobado, los lóbulos redondeados, el par central ligeramente más largo que el par lateral, cordado en la base, margen dentado, 6-7 x 7-10 mm; ecalloso, con 4 o 5 quillas muy bajas, inconspicuas en el disco. **Columna** unida totalmente al labelo, recta, dilatada verticalmente hacia el ápice; 7-9 mm de largo. **Clinandrio** corto, margen entero. **Rostelo** apical, hendido. **Lóbulos laterales del estigma** muy pequeños. **Antera** reniforme, 4 locular. **Polinios** 4, ovoides, subiguales; caudículas suaves y granulosas, más cortas que los polinios. **Nectario** poco profundo, penetrando ¼ del ovario, triangular, amplio hacia el ápice, liso. **Cápsula** elipsoide, 28-31 x 14 mm, pedicelo 2-4 mm de largo, cuerpo 23 mm de largo, cuello apical 3-4 mm de largo.

Epiphytic, caespitose, branching **herb. Roots** at base only. **Stems** terete, branching. **Leaves** 4-8, distributed throughout the stems, sheath finely striated, blade narrowly lanceolate, apex obtuse to minutely bilobed, margin entire. **Inflorescence** apical, flowers only once, short racemose, nutant. **Floral bracts** shorter than the ovary, triangular, acuminate. **Ovary** terete, not inflated. **Flowers** 7-9, successive, resupinate, green, more or less tinged with red, the column green, lighter in color. **Sepals** spreading, free, glabrous, elliptic, obtuse, 3-veined, margin entire; the **dorsal** somewhat incurvate; the **laterals** with a dorsal keel forming an apicule. **Petals** spreading, free, linear-oblanceolate, acute, 1-veined, margin entire. **Lip** united to the column, entire, reniform, apex 4-lobed, the lobes rounded, the central pair slightly longer than the lateral pair, base cordate, margin dentate, ecallose with 4-5 low, inconspicuous keels on the disc. **Column** straight, dilated vertically towards the apex. **Clinandrium hood** short, entire. **Rostellum** apical, slit. **Anther** reniform, 4-celled. **Pollinia** 4, obovoid, subequal. **Nectary** penetrating about one fourth of the ovary, triangular with a wide mouth. **Capsule** ellipsoid, with short pedicel and apical neck.

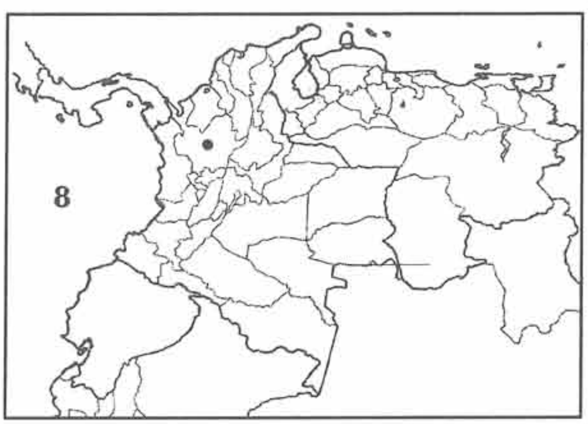
OTHER SPECIMENS: COLOMBIA: Antioquia: Yarumal, bajando a Ventanas, 2100 m, 26 III 1996, *Hágsater 11697*, AMO!

DISTRIBUTION AND ECOLOGY: Known only from northern edge of the Cordillera Central around Yarumal, at 2100 m, epiphyte in broad-leaved, short, wet forests. Flowering in March (June in cultivation in Mexico).

RECOGNITION: *Epidendrum yarumalense* belongs to the Diothonea Group and Subgroup which is characterized by the branching plants, linear lanceolate to oblong, bilobed leaves, racemose, arching-nutant inflorescence, membranaceous flowers (rarely fleshy), the entire to 3-lobed, ecallose lip with the margin erose, without or with 1-10 thin, smooth to erose keels, the column completely to obliquely united to the lip, the anther reniform. The new species has small flowers, slightly arching, 7-9 mm long column with the wings that unite it to the short lip, the lip entire, reniform, cordate at the base, the nectary penetrating the ovary behind the perianth and the sepals glabrous. *Epidendrum cleistocoleum* Hágsater & E. Santiago, also found in Antioquia, has the new stems originating from the apical internodes of the previous stem, linear-lanceolate petals, the reddish to purple lip united to the base of the column which is arching at the base and provided with a pair of prominent, rounded wings ventrally and the ventral surface with a cavity which is accessed by a long narrow slit. *Epidendrum cottoniiflorum* (Rchb.f.) Hágsater has larger plants, 20-50 cm tall, much branched, the lip united to the middle of the column, with a very narrow, cuneate base and the column strongly arched at the basal half, forming a prominent hump dorsally.

NOTE: The clonotype, having produced flowers after three months in cultivation produced smaller flowers than those pressed in the field. The illustration was prepared from the cultivated plant before being pressed.

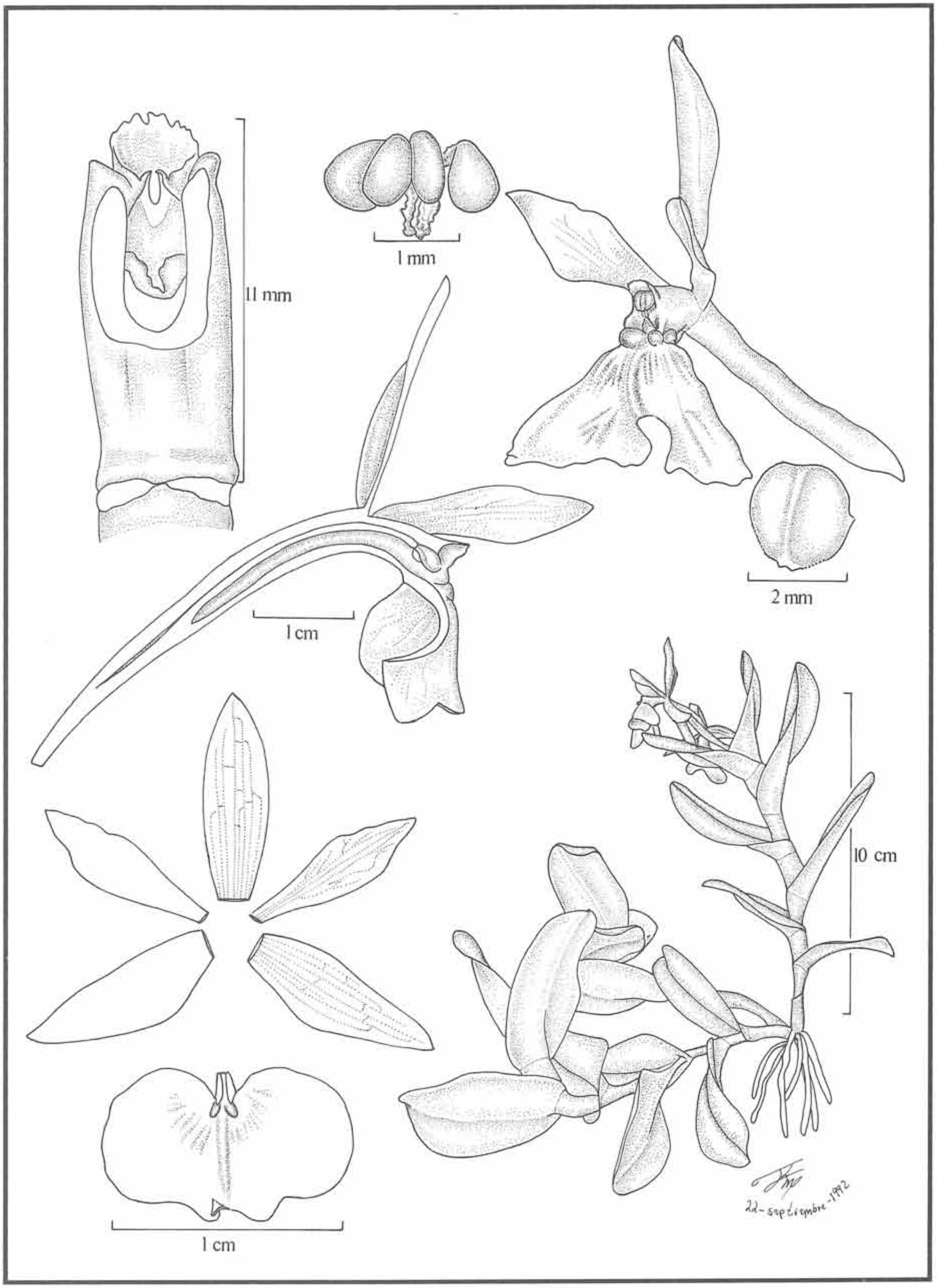
CONSERVATION STATUS: DD. Data deficient.



ETYMOLOGY: In reference to the town and municipality of Yarumal, where the type was collected.

Author: E. Santiago **Illustrator: R. Jiménez M.** **Editors: E. Hágsater & L. Sánchez S.**

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EPIDENDRUM YOJOAËNSE Hágsater & L. Sánchez

Plate 800

EPIDENDRUM YOJOAËNSE Hágsater et L. Sánchez, *sp. nov.*

Type: HONDURAS: Comayagua: Lago Yojoa, 700 m, collected by *Werner Rauh 44284,* cultivated by ***E. Hágsater 6874.*** Holotype: pressed in cultivation 23 September 1992, AMO! (Illustration voucher). Clonotypes: 4 January 1993, AMO! 21 December 1995, AMES!

Epidendro amparoano Schltr. simile sed planta viridis glauca, floribus viridibus pallidis, petalis rhombeis acutis, clinandrio eroso discrepans.

Hierba epífita, cespitosa, 14-18 cm de alto. **Raíces** basales, carnosas, delgadas, 1-1.5 mm de grosor. **Tallos** sencillos, tipo caña, lateralmente comprimidos, 9.5-12 cm de largo. **Hojas** 5-7, equidistantes a lo largo del tallo; vaina foliar lateralmente comprimida, no ornamentada, 1.5-2 cm de largo; lámina foliar elíptica a ovada, ápice asimetricamente bilobado, no ornamentada, carina dorsal ausente, margen entero, coloración concolora, verde glauco, 5-7 x 1.8-2.4 cm. **Bráctea espatacea** ausente. **Inflorescencia** apical en el tallo maduro, florece una sola vez, sésil. **Brácteas florales** mucho más pequeñas que el ovario, triangulares, agudas, 3-4 mm de largo. **Ovario** inflado, no ornamentado, terete, 35-40 mm de largo. **Flores** 1-3, simultáneas, resupinadas, verde claro. **Sépalos** subcoriáceos, glabros, abiertos, libres, 7-nervados, margen entero, 25-30 x 5-6 mm; el **dorsal** angostamente elíptico, agudo, margen extendido; los **laterales** oblicuamente lanceolados, agudos, carina dorsal ausente, margen revoluto. **Pétalos** parcialmente abiertos, rómbicos, agudos, 3-nervados, margen entero, extendido, 25-28 x 6-7 mm. **Labelo** unido a la columna, oscuramente trilobado reniforme, base profundamente cordada, margen ligeramente ondulado, 15-20 x 28-30 mm; bicalloso, los callos pequeños; lobulos laterales oblicuamente semiorbiculares; lobulo medio corto, emarginado, formando dos lóbulos, disco con venas engrosadas. **Columna** recta, 9-11 mm. **Clinandrio** prominente, entero, margen eroso. **Antera** subesférica, 4-locular, no ornamentada. **Polinios** 4, lateralmente comprimidos; caudículas suaves y granulosas, más pequeñas que los polinios; viscidio viscoso translucido. **Rostelo** subapical, hendido. **Lóbulos laterales del estigma** penetrando más de 1/2 de la cavidad estigmática. **Nectario** penetrando más de 1/2 de la longitud del ovario, no ornamentado. **Cápsula** no vista.

Epiphyte, caespitose **herb**. **Stems** cane-like, simple, lateraly compressed. **Leaves** 5-7, distributed throughout the stems, light green, foliar sheaths lateraly compressed, blade elliptic-ovate, apex bilobed. **Spathaceous bracts** absent. **Inflorescence** apical, flowers only once. **Floral bracts** smaller than the ovary, triangular, acute. **Ovary** inflated, unornamented, terete. **Flowers** 1-3, simultaneous, resupinate, pale green. **Sepals** subcoriaceous, glabrous, spreading, 7-veined, margin entire, spreading; the **dorsal** narrowly elliptic, acute; the **lateral** obliquely lanceolate, acute, margin revolute. **Petals** partialy spreading, elliptic-oblanceolate, acute, 3-veined, margin entire, spreading. **Lip** united to the column, obscurely trilobed-reniform, base deeply cordate, margin ondulate; bicallose, the calli small, disc with veins; lateral lobes obliquely semiorbicular, midlobe short, emarginate, forming two lobes. **Column** straight. **Clinandrium hood** prominent, entire, erose. **Anther** subespheric, 4-locular, unornamented. **Rostellum** subapical, slit. **Pollinia** 4, laterally compressed. **Nectary** one half of the ovary, unornamented. **Capsule** not seen.

OTHER SPECIMENS: HONDURAS: Without locality, *Herbert 8452,* SEL! **Comayagua:** Pito Solo, Lago Yojoa, 2000 ft [612 m], 7 IX 1952, *Edwards 243,* AMES (x2)! MO! Lago Yojoa, 700 m, 21 XII 1995, collected by *Rauh 44284, cultivated Hágsater 11155,* [clonotype] AMO! [Specimen and flowers in spirit.] **Cortés:** Santa Cruz de Yojoa, 2000 ft [612 m], *Edwards 530,* AMES! [illustration, AMO!].

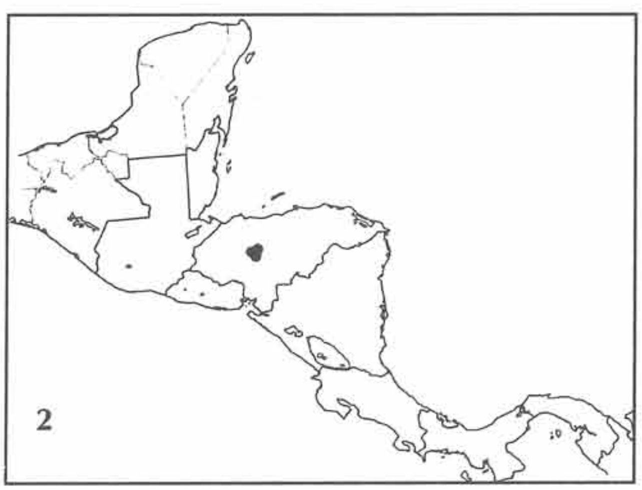
OTHER RECORDS: HONDURAS: Comayagua: Lago Yojoa, 700 m, *Werner Rauh 44284 sub Hágsater 6874,* the original plant in cultivation at the Heidelberg Botanic Garden, Germany. [Slide AMO!]

DISTRIBUTION AND ECOLOGY: Known only from the Atlantic watershed of Honduras. Epiphitic, in wet forest, from 600 to 700 m altitude. Flowering from September to December.

RECOGNITION: *Epidendrum yojoaënse* belongs to the Difforme Group which is characterized by the caespitose, sympodial plants, fleshy, pale green to glaucous leaves, apical inflorescence, sessile, rarely with a short peduncle, one-flowered to corymbose, without spathaceous bracts, fleshy, green to yellowish green rarely white flowers. The new species can be recognized by light glaucous-green plants, with laterally compressed stems, 1-3 pale green flowers, petals rhombic, acute, lip obscurely trilobed-reniform, and an erose clinandrium hood. It is very similar to *Epidendrum amparoanum* but this has non-glaucous, green plants and flowers, elliptic-oblanceolate petals, and a fimbriate clinandrium hood. *Epidendrum barbeyanum* Kraënzl. From Costa Rica has ancipitose stems, a trilobed lip, lateral lobes flabeliform, undulate, the midlobe much smaller than the lateral lobes, separated by a deep sinus, forming two divergent lobes, the lobes triangular to subrectangular, acute to rounded, the clinandrium hood is much reduced.

CONSERVATION STATUS: DD. Data deficient.

ETIMOLOGY: The epitet "yojoaënse" refers to Lake Yojoa, in the Department of Comayagua, Honduras, where the type plant was collected.



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